

Message

From: Martin, KarenL [Martin.KarenL@epa.gov]
Sent: 1/4/2022 5:34:12 PM
To: Flores-Gregg, Paula [flores.paula@epa.gov]
Subject: RE: [EXTERNAL] Fwd: Politico: A flood of climate aid is coming from Washington. Will those who need it miss out?

Okay thanks sounds good.

Karen L. Martin

Designated Federal Officer
White House Environmental Justice Advisory Council
Office of Environmental Justice
202-564-0203
martin.karenl@epa.gov

For up-to-date information about Environmental Justice funding opportunities, events, and webinars, subscribe to EPA's Environmental Justice listserv by sending a blank email to: join-epa-ej@lists.epa.gov. Follow us on Twitter: [@EPAEnvJustice](https://twitter.com/EPAEnvJustice).

From: Flores-Gregg, Paula <flores.paula@epa.gov>
Sent: Tuesday, January 4, 2022 12:15 PM
To: Martin, KarenL <Martin.KarenL@epa.gov>
Subject: RE: [EXTERNAL] Fwd: Politico: A flood of climate aid is coming from Washington. Will those who need it miss out?

Karen – I've checked and Cory captured all of the folks who have met with the WHEJAC. Moving forward, I can keep a list of meeting w/outside agencies as part of the calendar – as well as list of attendees. – Paula

From: Martin, KarenL <Martin.KarenL@epa.gov>
Sent: Tuesday, January 4, 2022 9:33 AM
To: Flores-Gregg, Paula <flores.paula@epa.gov>
Subject: FW: [EXTERNAL] Fwd: Politico: A flood of climate aid is coming from Washington. Will those who need it miss out?

Can you check the calendar and make sure Corey has listed all of the folks we have met with? As for attendance, I would have to go and see if zoom captures this information.

Thanks

Karen L. Martin

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From: Solow, Corey F. EOP/CEQ <Corey.F.Solow@ceq.eop.gov>
Sent: Tuesday, December 28, 2021 1:18 PM
To: Martin, KarenL <Martin.KarenL@epa.gov>; Flores-Gregg, Paula <flores.paula@epa.gov>
Cc: Ramoncita.C.Martinez <Ramoncita.C.Martinez@ceq.eop.gov>
Subject: RE: [EXTERNAL] Fwd: Politico: A flood of climate aid is coming from Washington. Will those who need it miss out?

Good afternoon Karen and Paula, and happy holidays!

In preparation for a future conversation regarding agency engagement with the WHEJAC, I started a list below of agencies the WHEJAC has met with in 2021 – please add others I have forgotten:

- OMB – Justice40 guidance discussions, and budget discussion at business meeting
- DOE – briefing on Earthshot at business meeting, and presentation to Scorecard WG
- USDA – Justice40 WG presentation
- DOT – Justice40 WG presentation
- HUD – Justice40 WG presentation
- EPA – Scorecard WG presentation
- CPO – Public meeting
- CEQ NEPA team – Public meeting

Also, do you have a record of attendance at WHEJAC Workgroup meetings? I think that would be helpful, too.

Thank you!

Corey

From: Martinez, Cecilia C. EOP/CEQ
Sent: Tuesday, December 28, 2021 11:04 AM
To: Peggy M. Shepard (WE ACT) <peggy@weact.org>; Catherine Flowers <[Ex. 6 Personal Privacy \(PP\)](#)>; Richard Moore <[Ex. 6 Personal Privacy \(PP\)](#)>
Cc: Martin, KarenL <Martin.KarenL@epa.gov>; Solow, Corey F. EOP/CEQ <Corey.F.Solow@ceq.eop.gov>
Subject: RE: [EXTERNAL] Fwd: Politico: A flood of climate aid is coming from Washington. Will those who need it miss out?

Dear Ms. Shepard,

Thank you for your email. We are happy to provide you with updates. There many programs across all the agencies, with many different activities. As we have indicated to the Chairs, Vice Chairs, and WG Chairs we will respond to any requests from WHEJAC regarding updates from agencies. If there are specific updates on specific programs you would like to put on the itinerary, please inform Karen Martin, and we will work on this. We have tried to be responsive to the WHEJAC in all their requests and made sure to have high level representation from agencies in all the briefings. However, if we have missed anything, please do let us know as we have taken this work very seriously.

I assure you that the Senior Director for Environmental Justice, the Deputy Director for Environmental Justice, the CEQ EJ Team and EPA's DFO team are tirelessly working and are not merely acting as window dressing. If you and the Chairs would like to have a conversation regarding this at one of our ongoing biweekly meetings, let's put on the agenda, and again we are more than happy to discuss.

Best regards,

>.<.>.<.>.<.>.<

Cecilia Martinez, PhD

Senior Director for Environmental Justice

Council on Environmental Quality

Ex. 6 Personal Privacy (PP)

From: Peggy M. Shepard (WE ACT) <peggy@weact.org>

Sent: Monday, December 27, 2021 11:33 AM

To: Catherine Flowers <Ex. 6 Personal Privacy (PP)>; Richard Moore <Ex. 6 Personal Privacy (PP)>

Cc: Martin, KarenL <Martin.KarenL@epa.gov>; Martinez, Cecilia C. EOP/CEQ <Ramoncita.C.Martinez@ceq.eop.gov>

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If we have no idea what agencies are doing, we are just spinning our wheels and doing busy work— as if we need to be doing useless work— 3-6 nights every two weeks!

Either CEQ does not know what is going on or we are being used as window dressing and being bamboozled — again, as usual.

I think it is time to accelerate the accountability of the administration.

Regards,

Peggy

----- Forwarded message -----

From: Danielle Deane-Ryan <Danielle.Deane-Ryan@bezosearthfund.org>

Date: Fri, Dec 24, 2021 at 10:40 AM

Subject: Politico: A flood of climate aid is coming from Washington. Will those who need it miss out?

To: Danielle Deane-Ryan <Danielle.Deane-Ryan@bezosearthfund.org>

FYI, many federal agency and elected leaders quoted. I was interviewed as well. Important commentary in the final section about the connection/warning between getting aid out those that most need it and getting folks out to vote.

><https://www.politico.com/news/2021/12/23/climate-spending-washington-communities-526077><

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Peggy M. Shepard

Executive Director

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New York, NY 10031

212-961-1000, ext. 306

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Message

From: Solow, Corey F. EOP/CEQ [Corey.F.Solow@ceq.eop.gov]
Sent: 1/4/2022 5:52:45 PM
To: Martin, KarenL [Martin.KarenL@epa.gov]; Flores-Gregg, Paula [flores.paula@epa.gov]
CC: Ramoncita.C.Martinez [Ramoncita.C.Martinez@ceq.eop.gov]
Subject: RE: [EXTERNAL] Fwd: Politico: A flood of climate aid is coming from Washington. Will those who need it miss out?

Wonderful – thank you so much, Karen!

From: Martin, KarenL <Martin.KarenL@epa.gov>
Sent: Tuesday, January 4, 2022 12:36 PM
To: Solow, Corey F. EOP/CEQ <Corey.F.Solow@ceq.eop.gov>; Flores-Gregg, Paula <flores.paula@epa.gov>
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Hey Corey,

You have captured all the meetings that have been scheduled with the WHEJAC. I will have to check my zoom account to see if I can pull up the attendance.

Thank You

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Peggy M. Shepard

Executive Director

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212-961-1000, ext. 306

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Message

From: Ex. 6 Personal Privacy (PP)
Sent: 12/27/2021 5:59:30 PM
To: peggy@weact.org; 'Catherine Flowers' Ex. 6 Personal Privacy (PP)
Ex. 6 Personal Privacy (PP)
CC: Martin, KarenL [Martin.KarenL@epa.gov]; Ramoncita.C.Martinez [Ramoncita.C.Martinez@ceq.eop.gov]; Bullard, Robert [Robert.Bullard@tsu.edu]
Subject: RE: Politico: A flood of climate aid is coming from Washington. Will those who need it miss out?
Attachments: Dr. Bullard Justice40 Infrastructure Equity Racial Justice Lens_12-07-21.pdf

Colleagues,

Hope everyone is enjoying a fantastic holiday season. I read this and several other articles re the administration and it's specific departments handling of equity and racial justice issues—not just environmental and climate, infrastructure and JUSTICE40—but also voting rights (see PowerPoint that views these intersecting issues through an equity and racial justice lens). The various departments from what I can glean appear to pushing forward and rolling out initiatives (without much public input) as if these justice issues were separate issues—and that bad news. It would be interesting to see an overlay and analysis of how the various funding initiatives connect and their “combined impact.” That's why I have been “especially hard” on the federal department officials that have briefed us—nothing personal against the individuals but the messages presented leave a lot to be desired. In my humble opinion, they have not given us what we have asked: criteria they are using to evaluate and assign “priority projects.” It is possible those conducting the briefing may not know. I suspect each agency is going about this in its own individual way—which may lead to some unintended outcomes not beneficial to those most in need.

Happy New Year!

Bob

Robert D. Bullard, Ph.D.

Distinguished Professor of Urban Planning & Environmental Policy
Director, Bullard Center for Environmental & Climate Justice



TEXAS SOUTHERN UNIVERSITY
Barbara Jordan – Mickey Leland
School of Public Affairs

Office: 713-313-6840 | Email: Robert.Bullard@tsu.edu
School of Public Affairs 402F
3100 Cleburne, PAB 415F | Houston, Texas 77004 |

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Peggy M. Shepard

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WE ACT for Environmental Justice

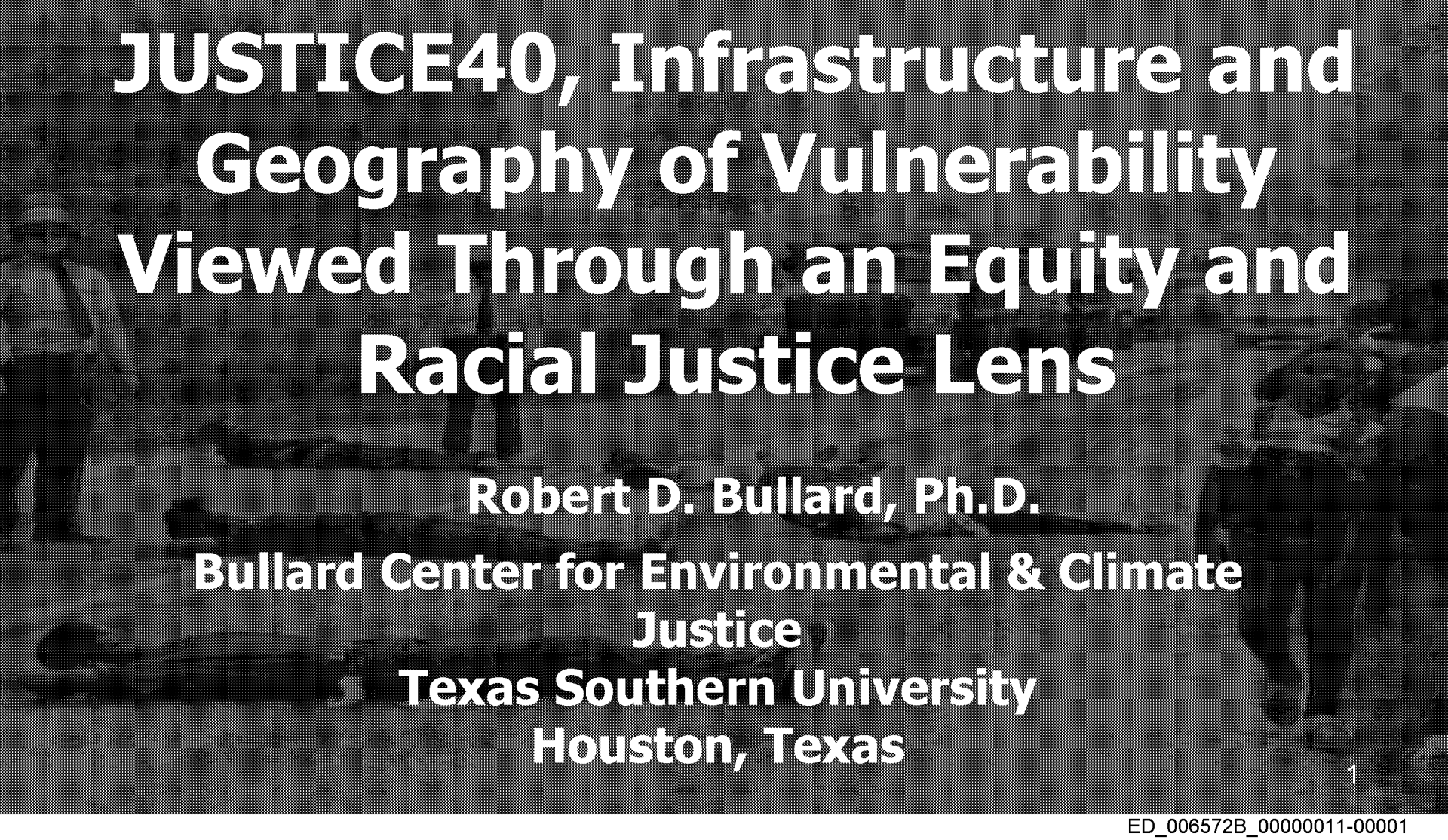
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A black and white photograph of a protest scene. In the foreground, several people are lying on their backs on a paved surface. In the background, a group of people is standing, some looking towards the camera. The image has a grainy, high-contrast appearance.

JUSTICE40, Infrastructure and Geography of Vulnerability Viewed Through an Equity and Racial Justice Lens

Robert D. Bullard, Ph.D.

**Bullard Center for Environmental & Climate
Justice**

**Texas Southern University
Houston, Texas**

Connecting the dots...



Books I've Written:

It's just one book, but don't tell anybody...

- Invisible Houston
- Dumping in Dixie
- People of Color Environmental Groups Directory
- In Search of the New South
- Growth and Decline of a Sunbelt Boomtown
- Confronting Environmental Racism
- Residential Apartheid
- Unequal Protection
- Just Transportation
- Sprawl City
- Highway Robbery
- Just Sustainabilities
- The Quest for Environmental Justice
- Growing Smarter
- The Black Metropolis in the Twenty-First Century
- Race, Place, and Environmental Justice After Hurricane Katrina
- Environmental Health and Racial Equity in the United States
- The Wrong Complexion for Protection

President Biden's

**BIDEN
HARRIS**

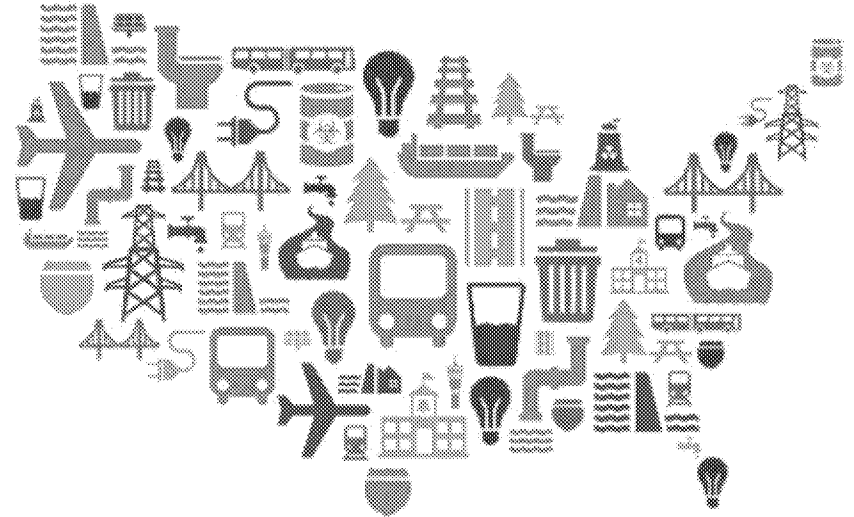
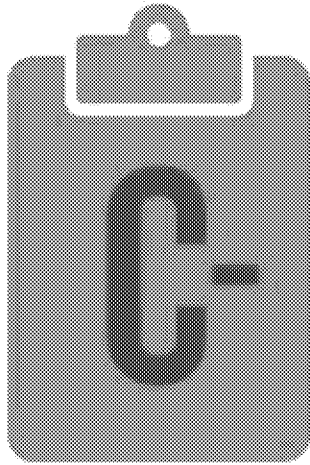
THE BIDEN PLAN TO
**SECURE ENVIRONMENTAL
JUSTICE AND
EQUITABLE ECONOMIC
OPPORTUNITY**

LEARN MORE →



- President Biden's Initiative is a plan to deliver 40% of the overall benefits of climate investments to disadvantaged communities -- environmental justice communities that historically have been left behind economically and overly polluted.

The grades are in.
America's infrastructure earns a C-



2021 REPORT CARD
FOR AMERICA'S INFRASTRUCTURE
ASCE

www.infrastructurereportcard.org

2021 Report Card for America's Infrastructure

G.P.A.

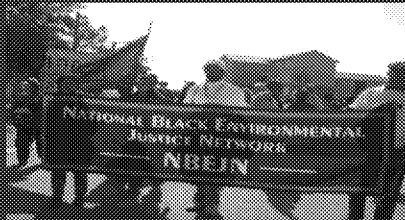
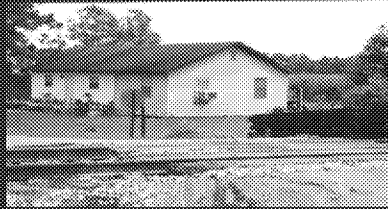


*Image Source: ASCE, 2021 Report Card for America's Infrastructure

- America's infrastructure is not created equal
- Systemic racism is built into American social and physical infrastructure
- Biased planning, policies and funding are major contributors to the racial infrastructure gap
- Racial redlining and housing segregation help drive infrastructure disparities
- Environmental racism and American apartheid pushed locally unwanted land uses (LULUs) into poor and people of color communities, forcing them to become "dumping grounds" for waste and other industrial facilities

HAS
HISTORICALLY
PROMOTED

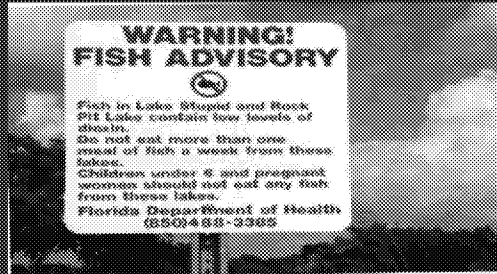
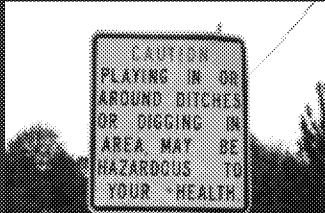
Redefining the Environment



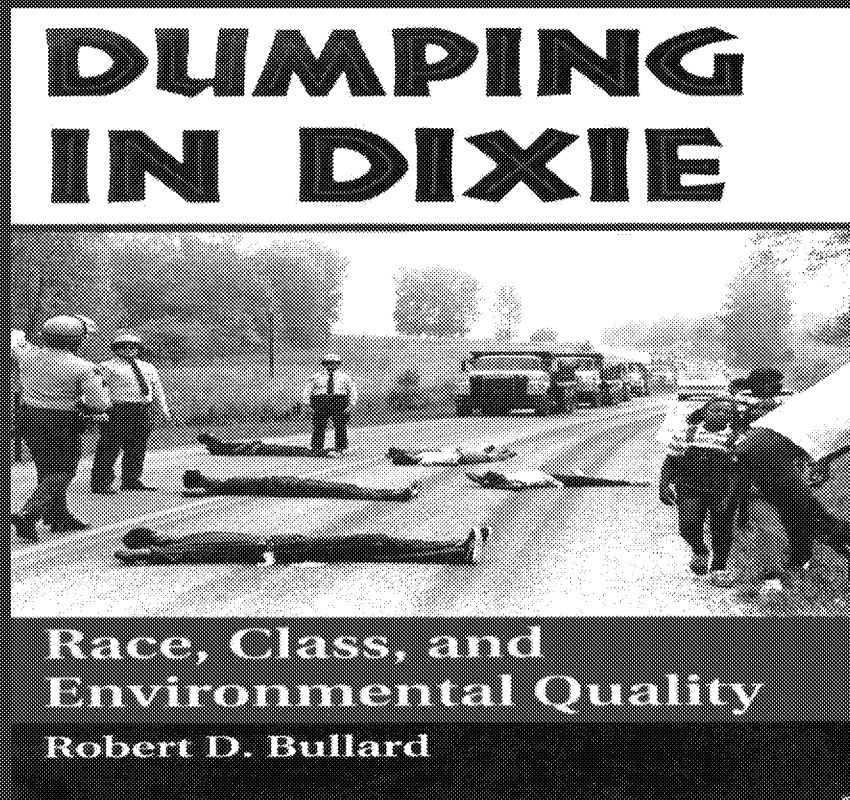
- Where we live
- Where we work
- Where we play
- Where we learn
- Where we pray
- Physical and natural world

Environmental Justice Principle

- Environmental justice embraces the principle that all people and communities are entitled to equal protection of environmental, energy, health, employment, education, housing, transportation, and civil rights laws

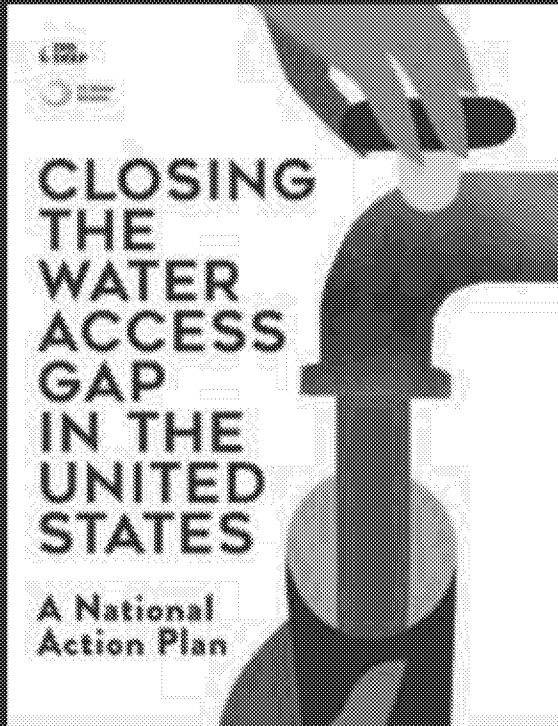


Race and Environment in the South



- *Dumping in Dixie* was the first book in 1990 to document the connection between waste dumping, pollution, income, and race
- The South or Dixie is the most environmentally degraded region in the United States
- It is no accident that the modern civil rights and environmental justice movements were born in the South

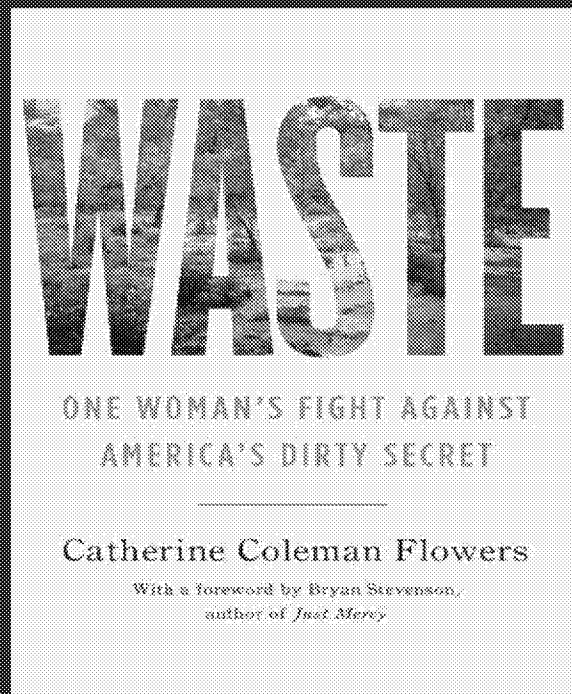
Water and Sanitation Access Gap



- is the strongest predictor of water and sanitation access in the U.S.
- Only of white households lack complete plumbing, as compared to of African-American and Latinx households, and of Native American households
- African-American and Latinx households are nearly as likely to lack complete plumbing than white households, and Native American households are more likely

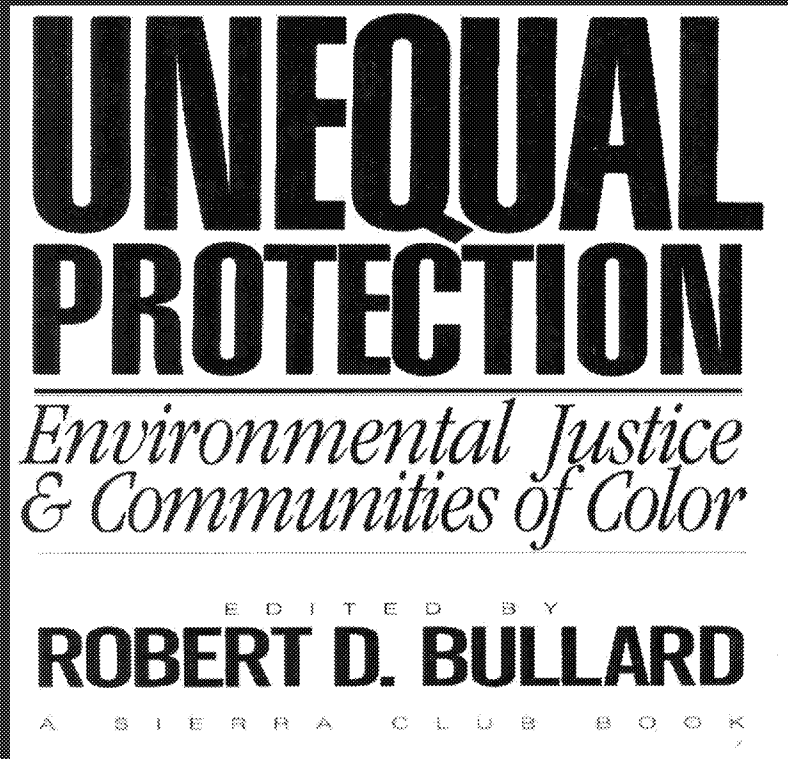
Source: Roller et al. (2019)

Textbook Water Infrastructure Racism



Source: Photo Courtesy of CREEJ

Geography of Spatial Inequality



- In the United States, all communities are not created equal
- If a community happens to be poor, working class or inhabited largely by people of color, it generally receives less protection
- Historically, exploitation of land and exploitation of people are highly correlated

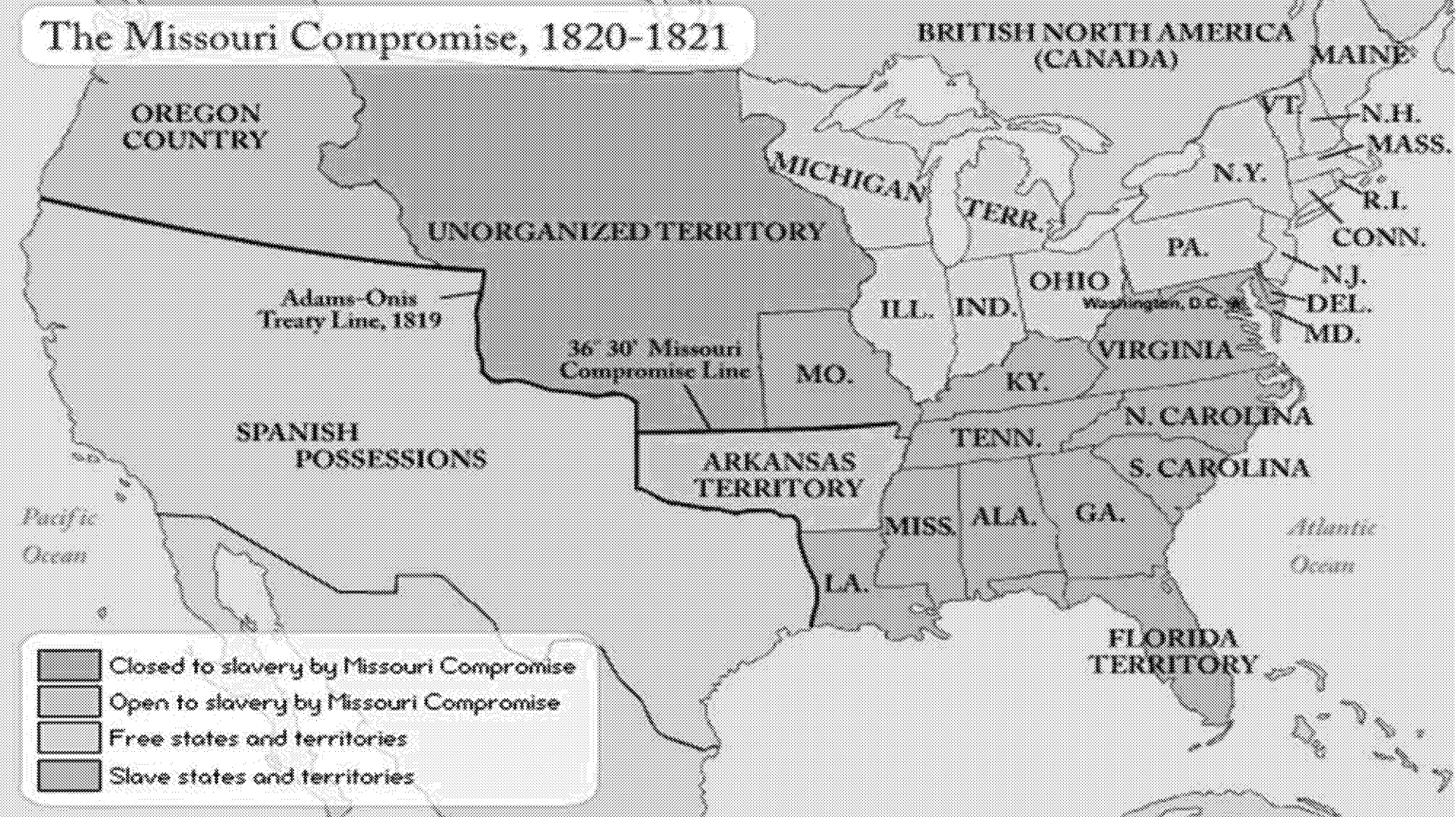
HOW

MAPS

CLOSELY WITH

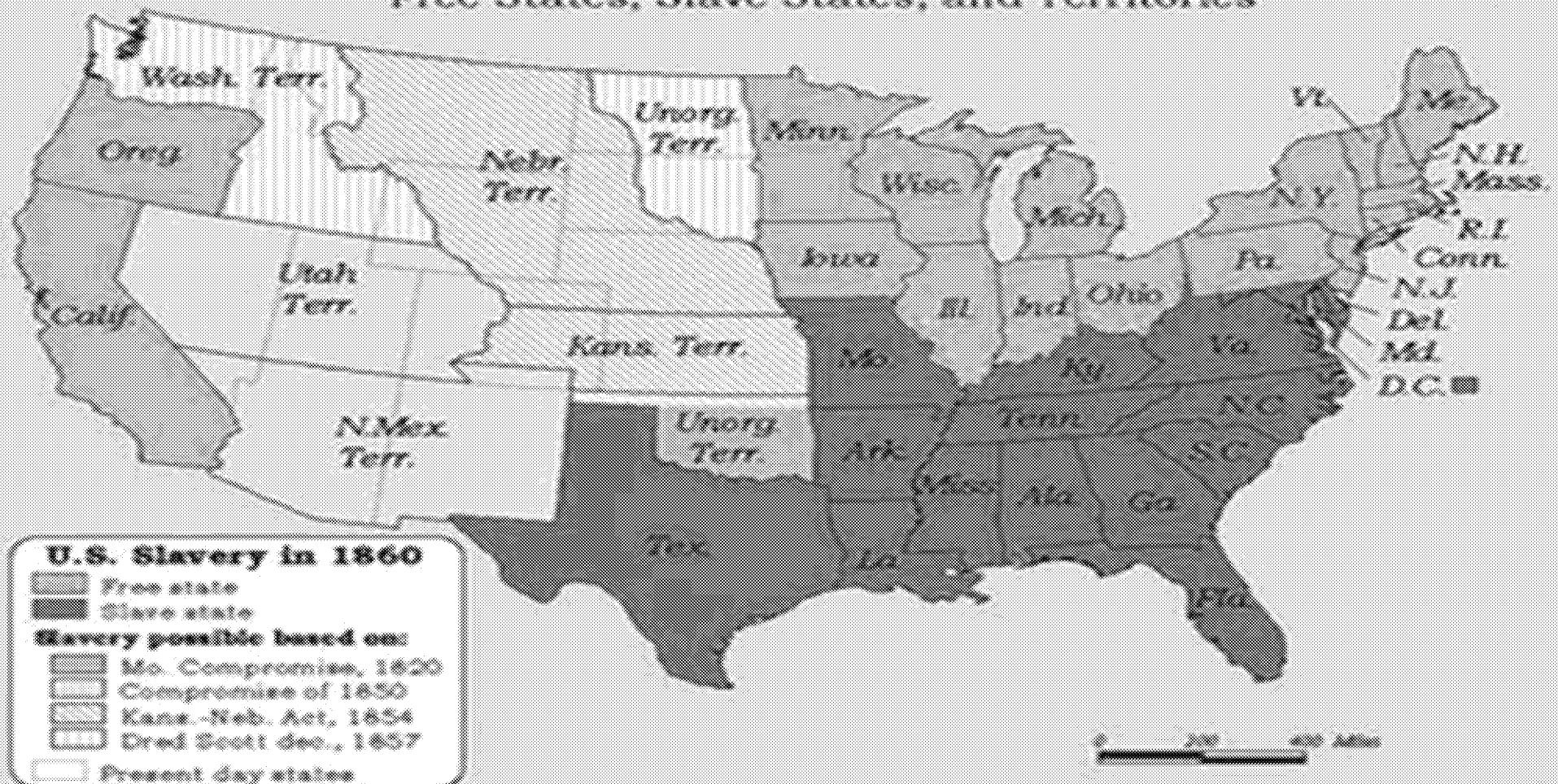


The Missouri Compromise, 1820-1821



United States in 1860

Free States, Slave States, and Territories



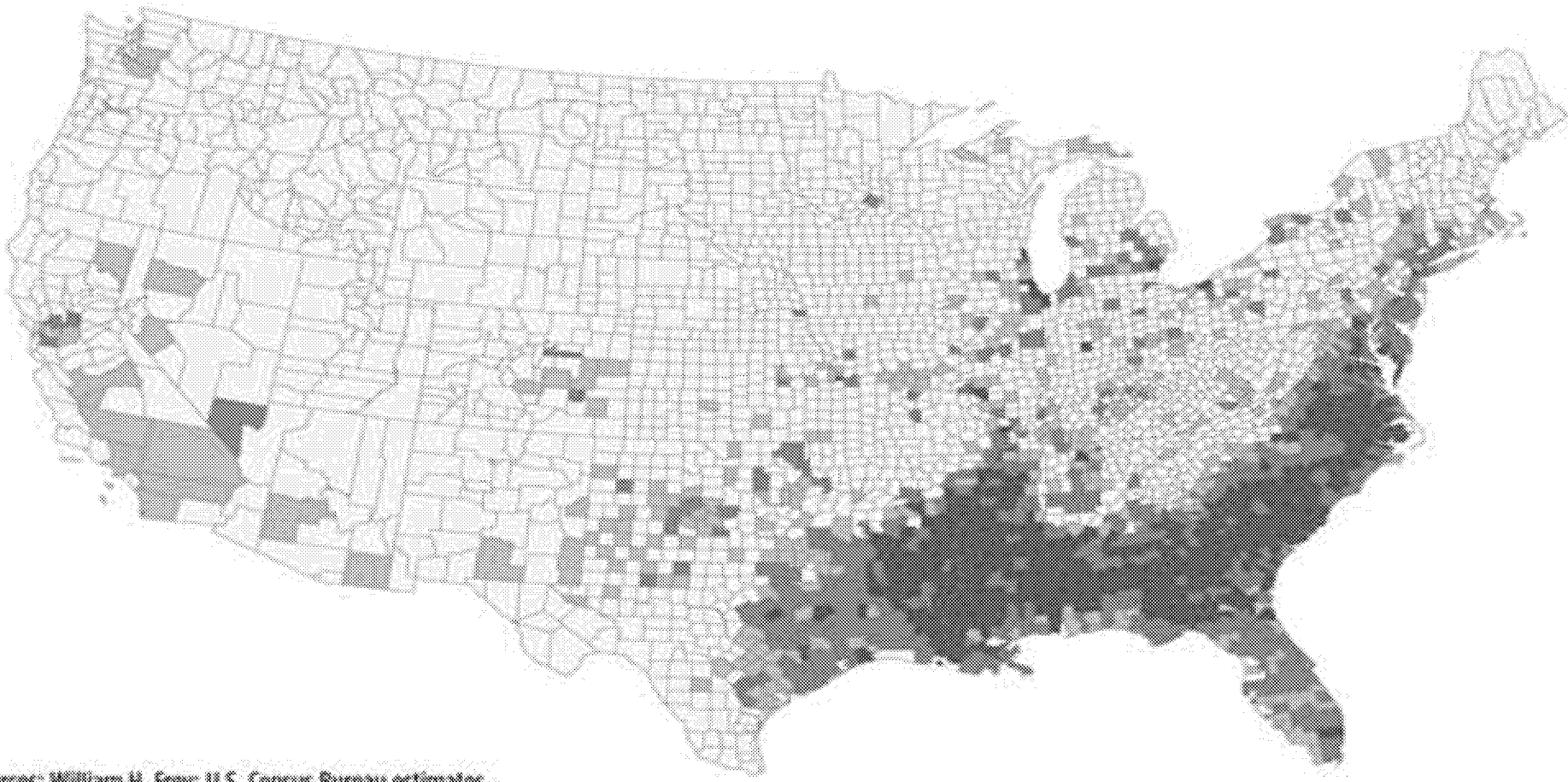
Segregation in 1950



SOURCE: 1950 U.S. CENSUS

FIGURE 3: PERCENTAGE AFRICAN AMERICAN BY COUNTY

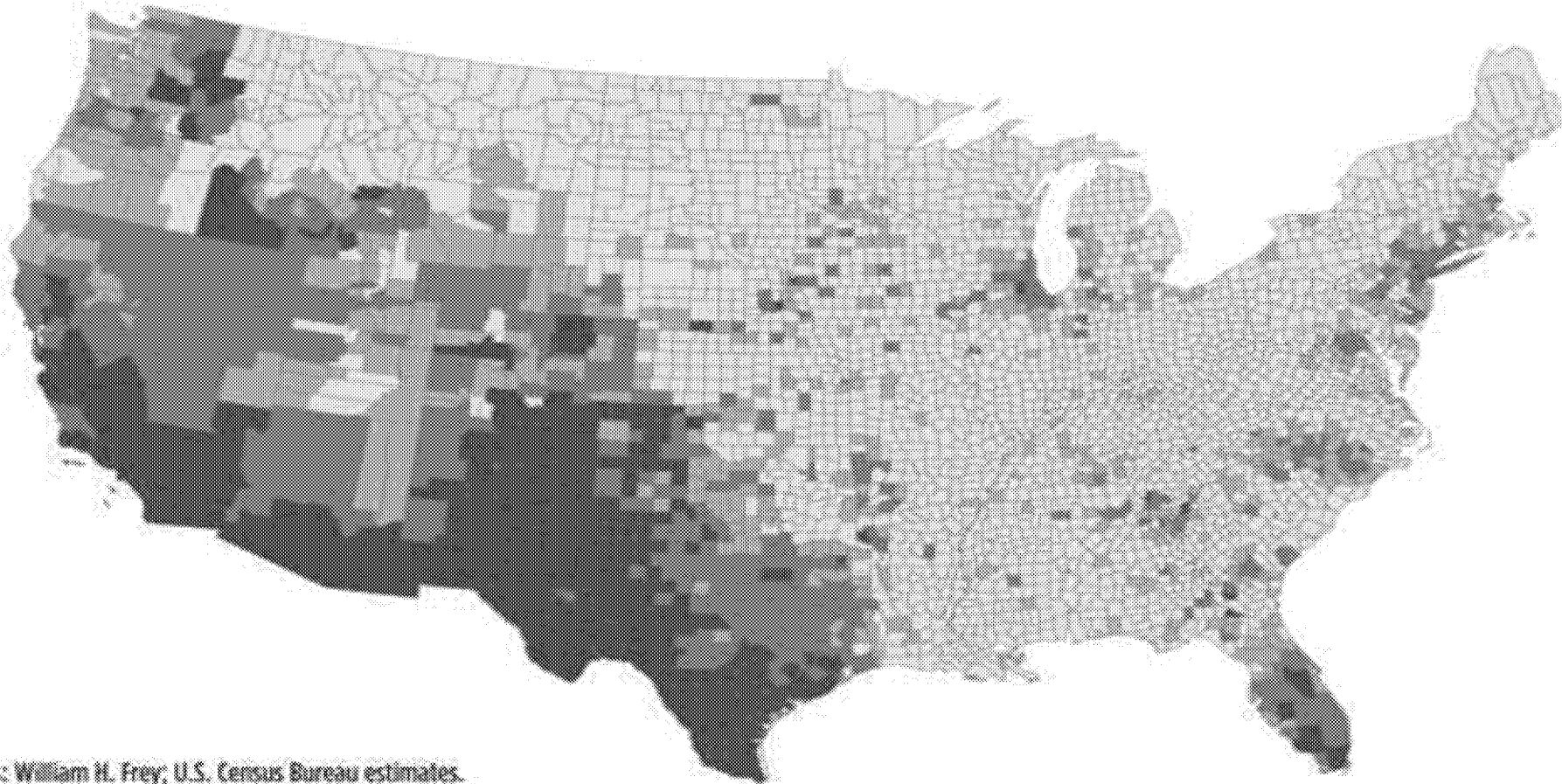
Under 5% 5% to 9.9% 10% to 24.9% 25% and above



Sources: William H. Frey; U.S. Census Bureau estimates.

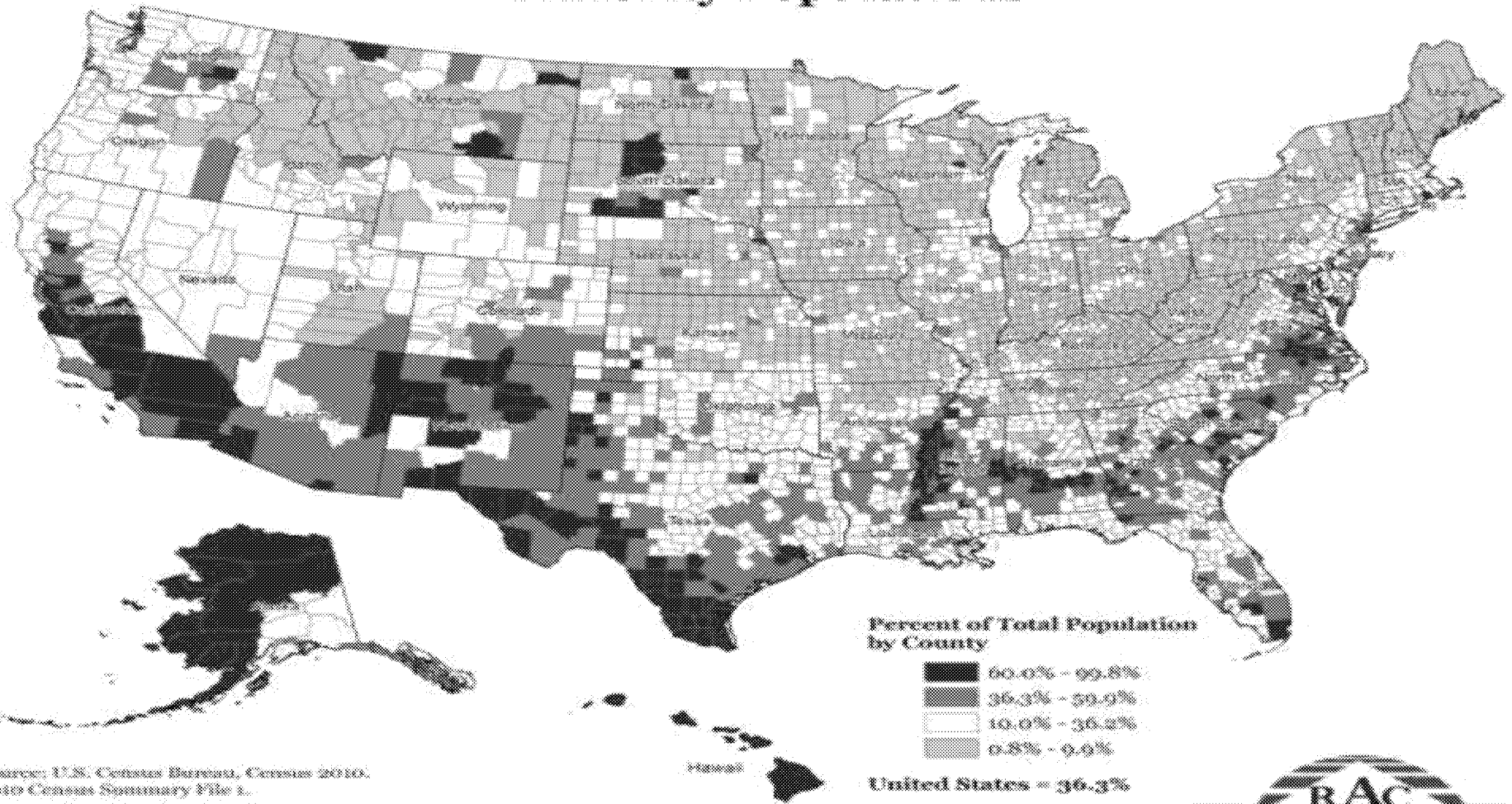
FIGURE 2: PERCENTAGE HISPANIC BY COUNTY

Under 5% 5% to 9.9% 10% to 24.9% 25% and above



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Minority Populations

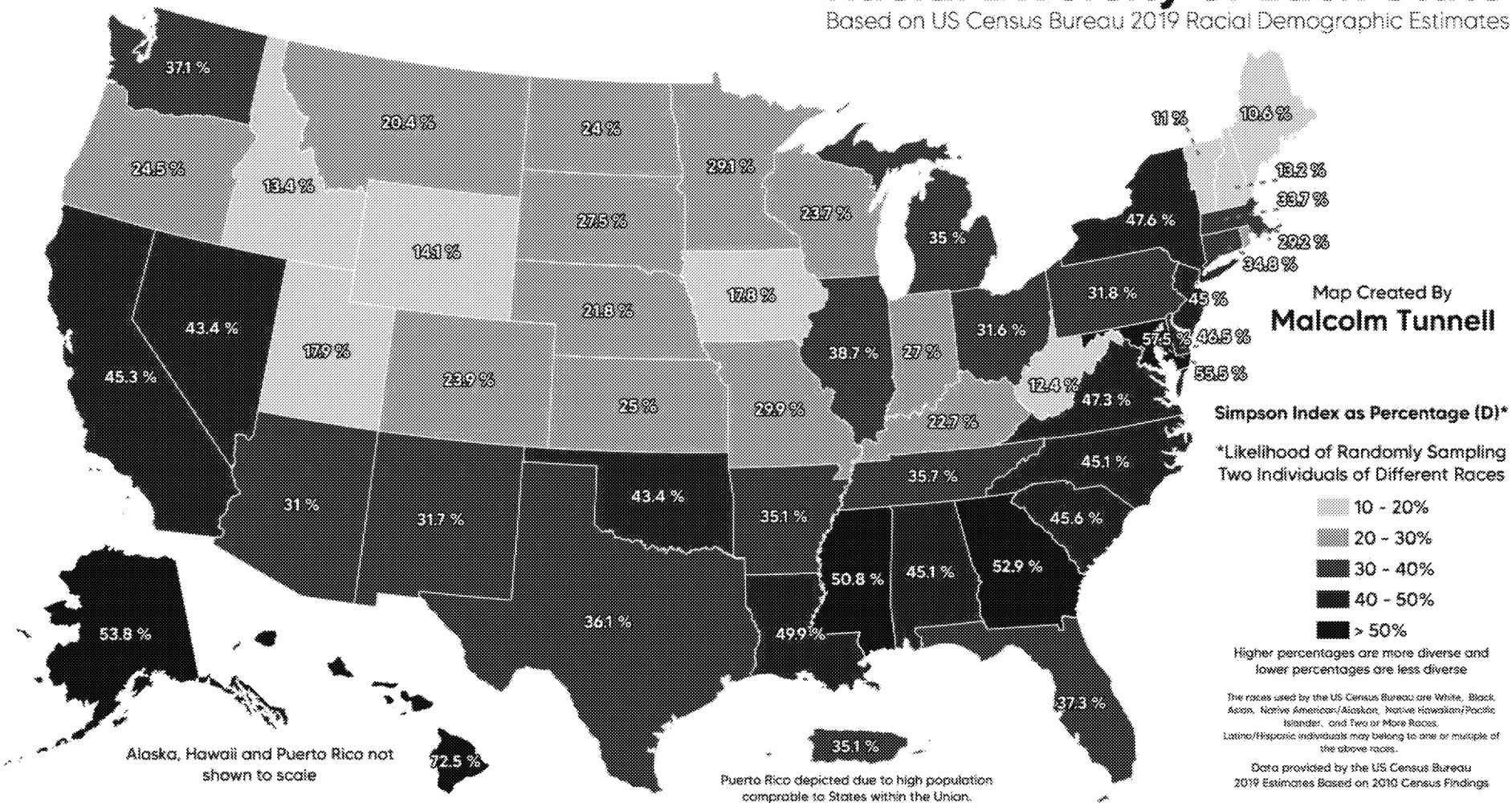


Source: U.S. Census Bureau, Census 2010, 2010 Census Summary File 1.

Note: Alaska and Hawaii not shown to scale.

Racial Diversity of Each State

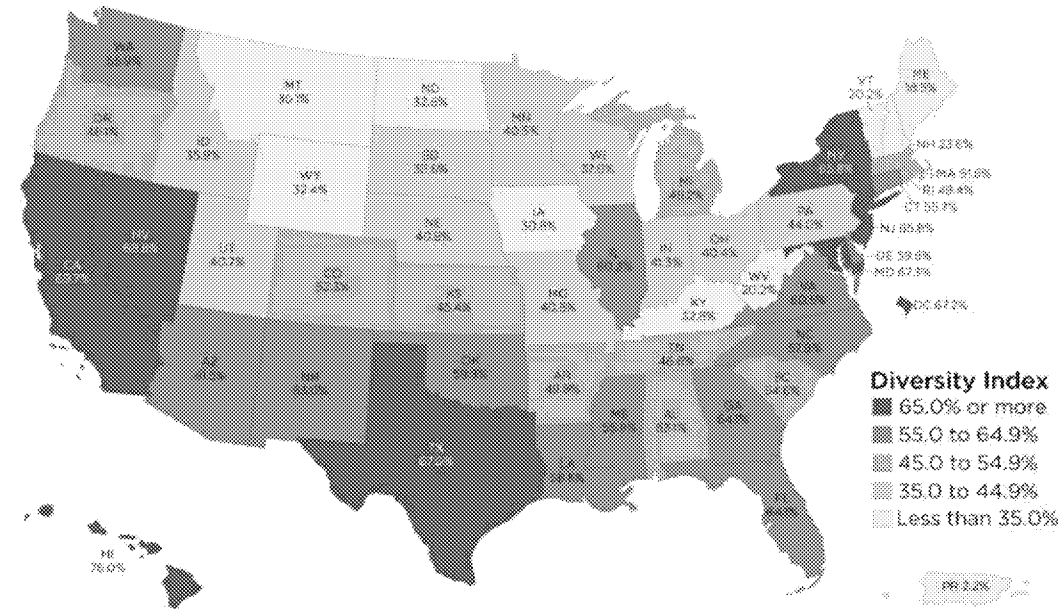
Based on US Census Bureau 2019 Racial Demographic Estimates



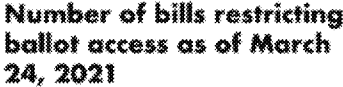
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Racial and Ethnic Diversity Index by State: 2020

The Diversity Index tells us the chance that two people chosen at random will be from different racial and ethnic groups.



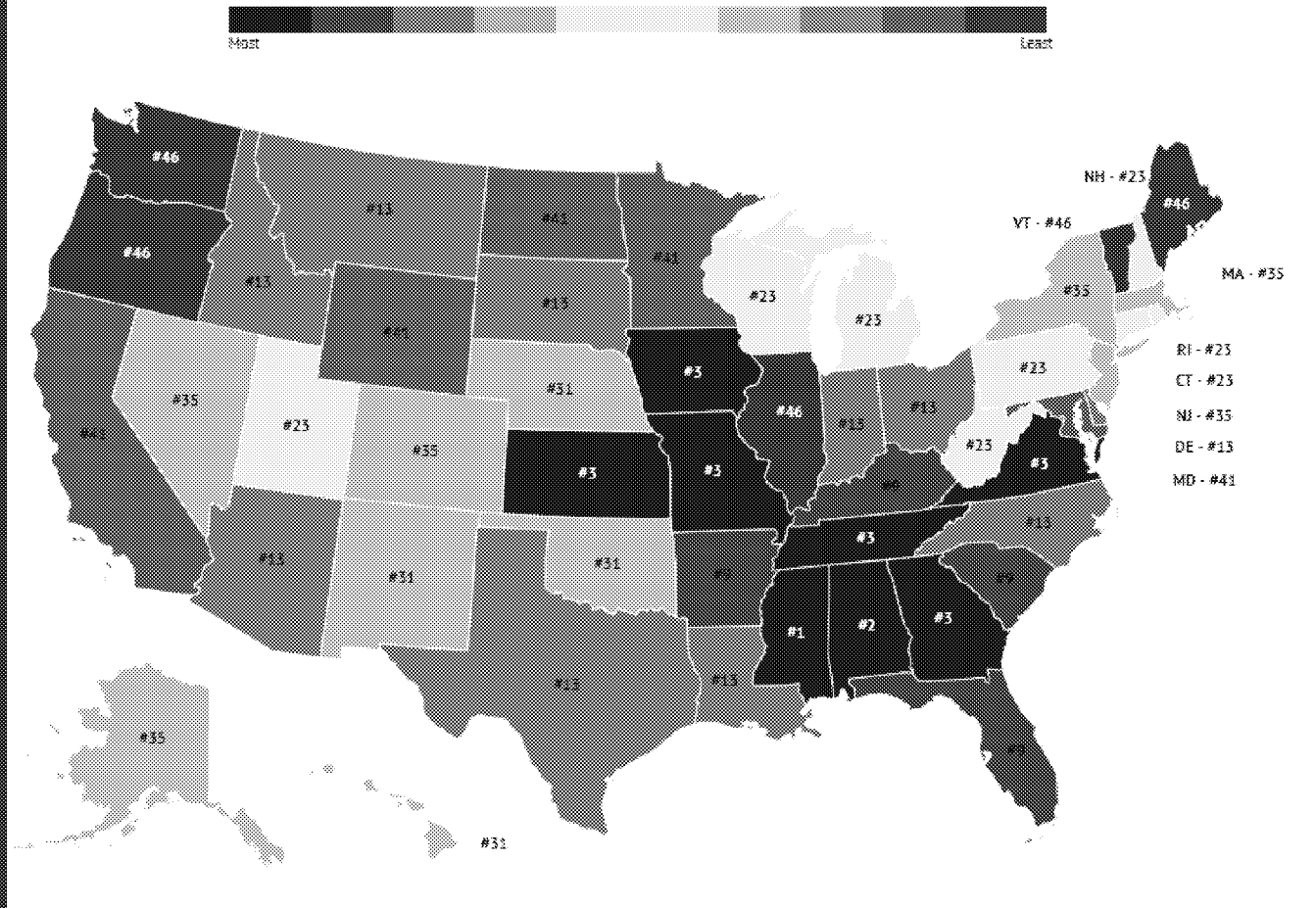
LEGACY OF



 26+
 20-25
 11-15
 6-10
 1-5
 None

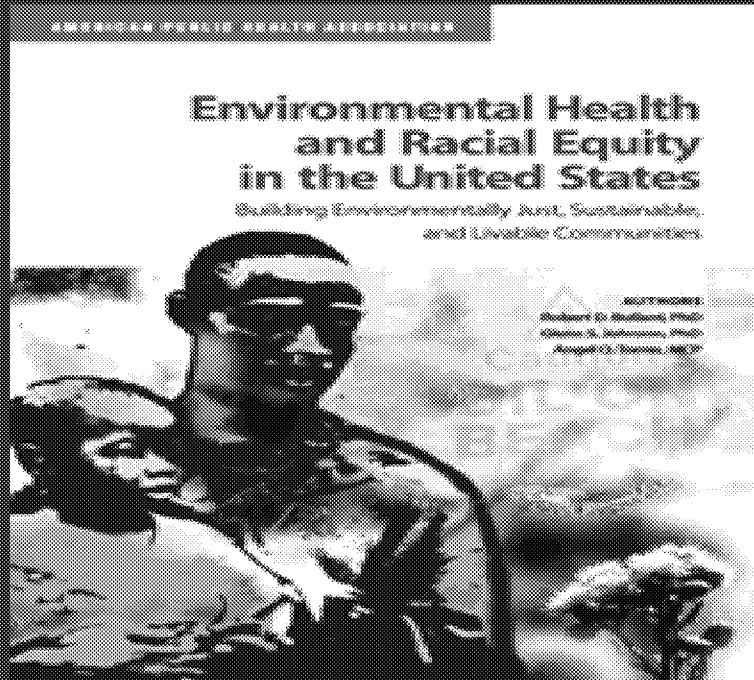
ED_006572B_00000011-00025

The Most Difficult States To Vote

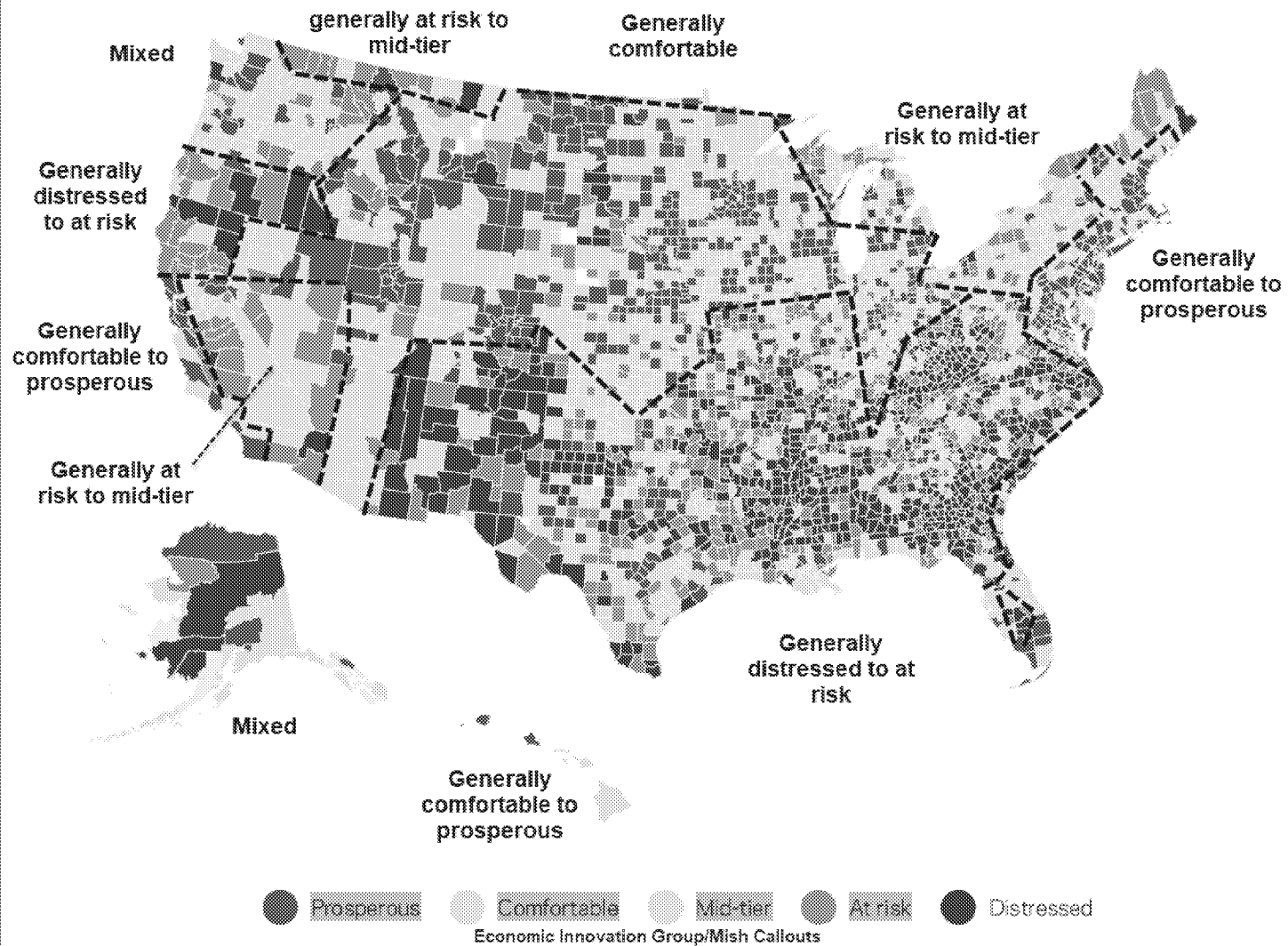


Source: Zippia (2020)

Why Your Zip Code Matters

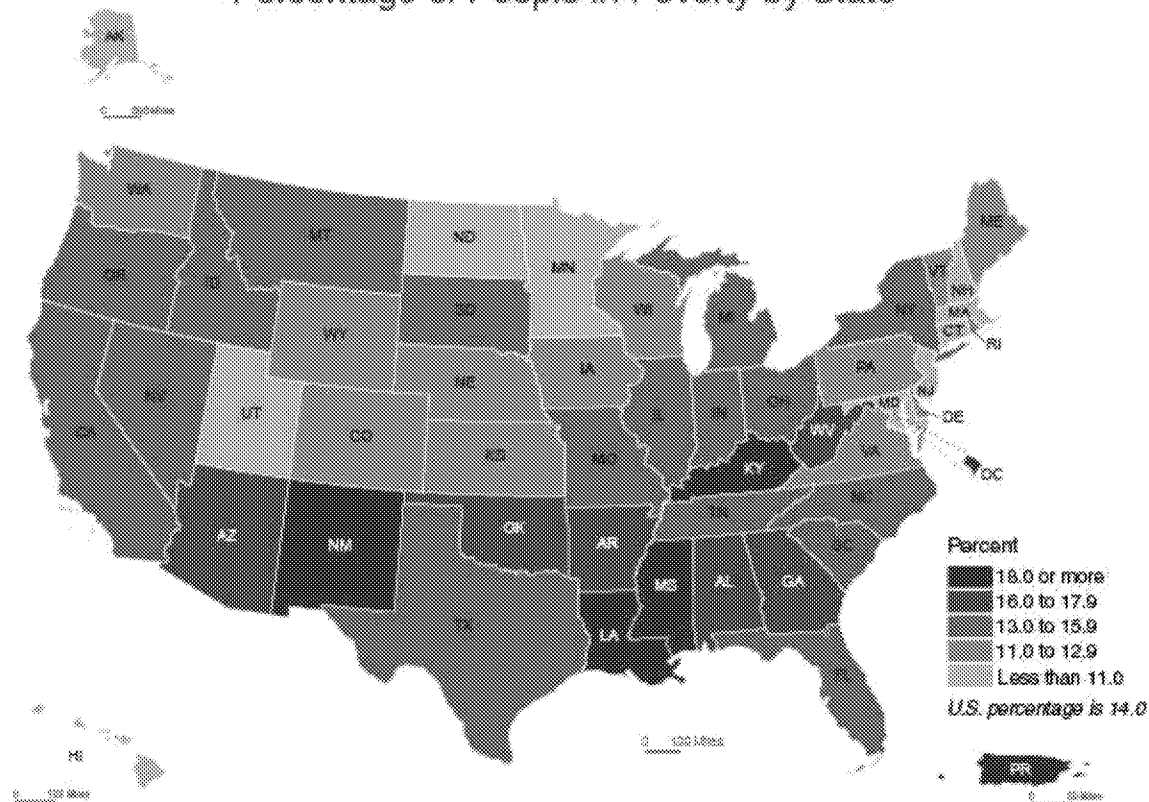


- Where you live can affect your health and your quality of life
- Zip code is a powerful predictor of health and well-being
- Wealth and health are correlated
- The poorest people within the U.S. have the worst health and the most degraded physical environments



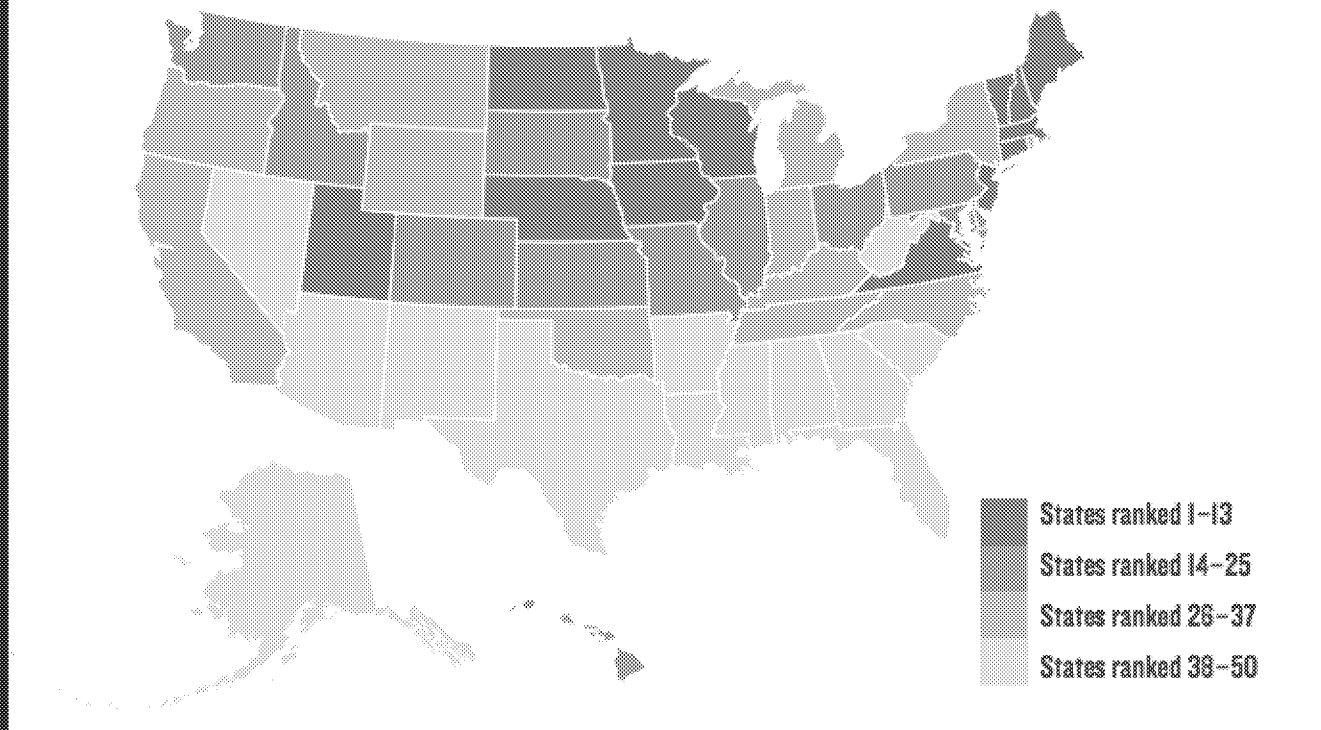
Poverty in the United States

Percentage of People in Poverty by State



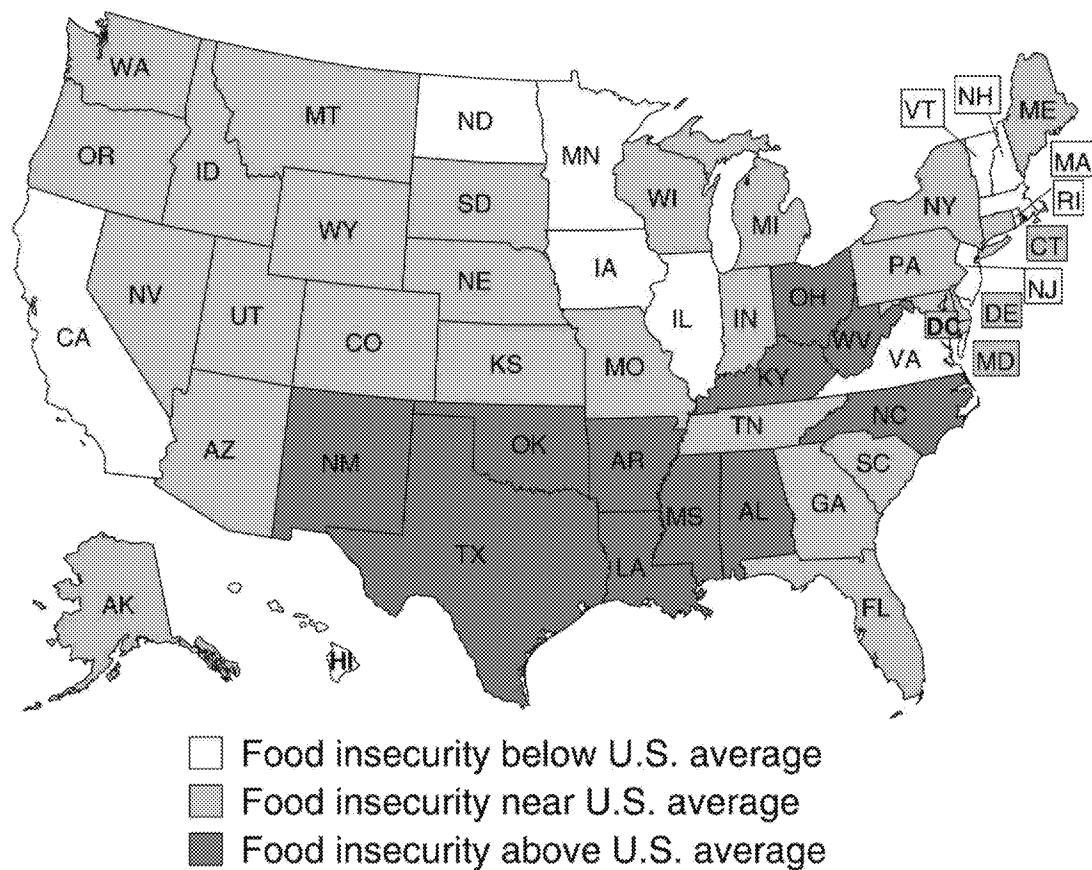
Note: U.S. percentage does not include data for Puerto Rico.

A STATE-TO-STATE COMPARISON OF OVERALL CHILD WELL-BEING*: 2017



Source: Annie E. Casey Foundation (2017)

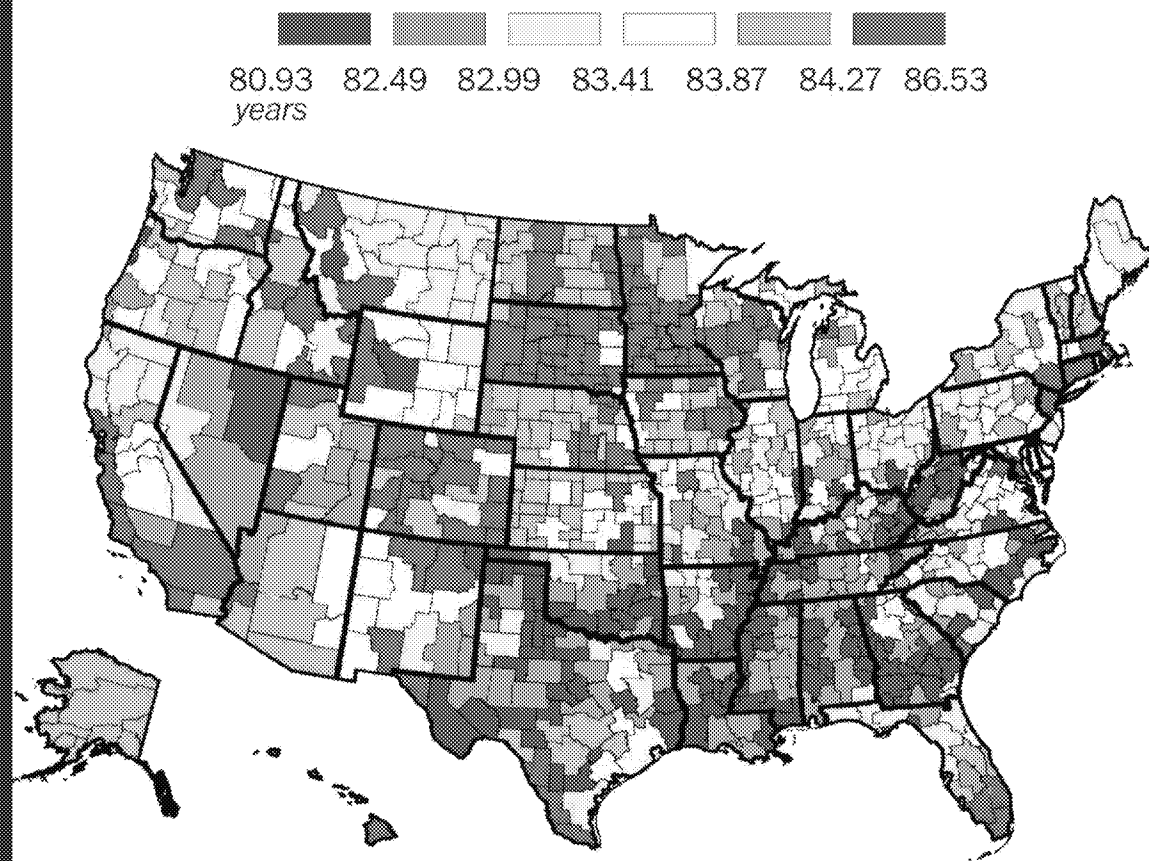
Prevalence of food insecurity, average 2017-19



Source: USDA, Economic Research Service using data from the December 2017, 2018, and 2019 Current Population Survey Food Security Supplements.

The geography of life expectancy

Average life expectancy at age 65

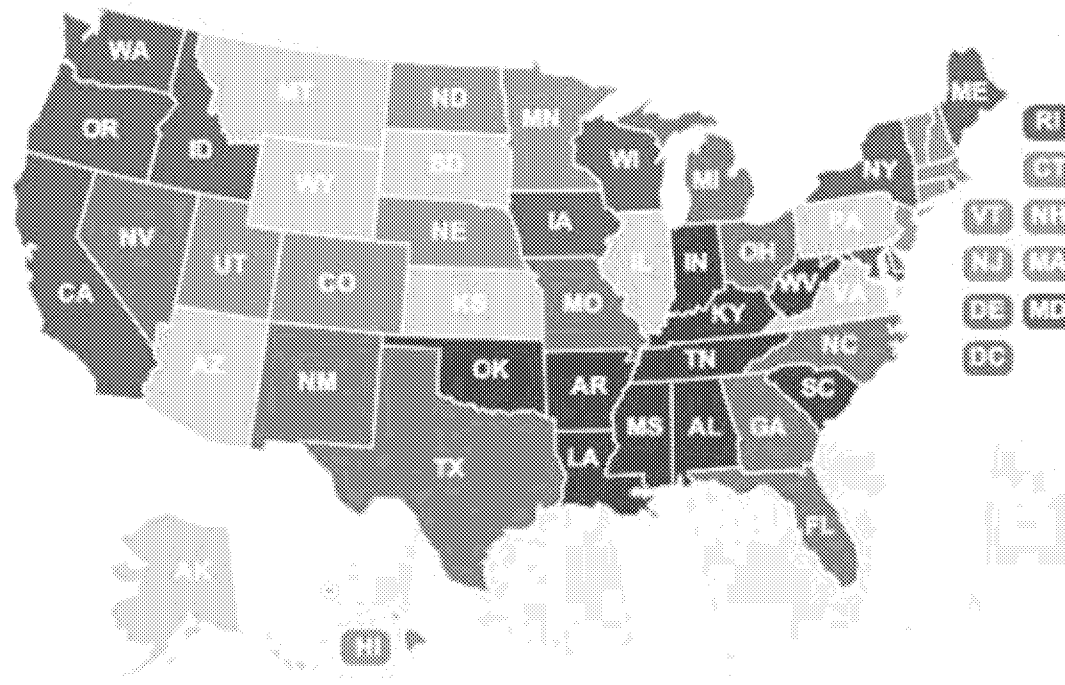


Source: Finkelstein, Gentzkow and Williams, 2019

THE WASHINGTON POST

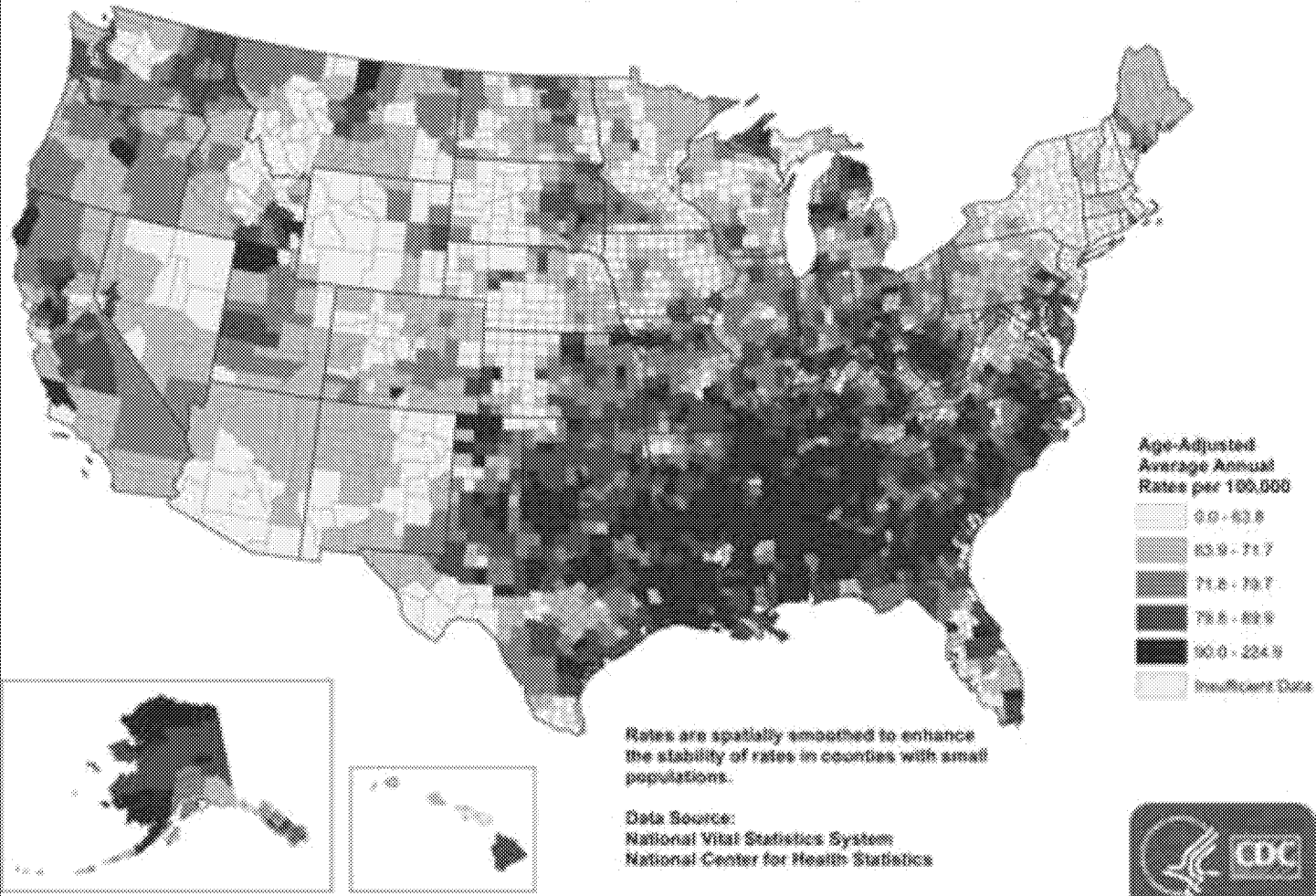
Overall Rankings

Overall: Weighted sum of the number of standard deviations each core measure is from the national average.

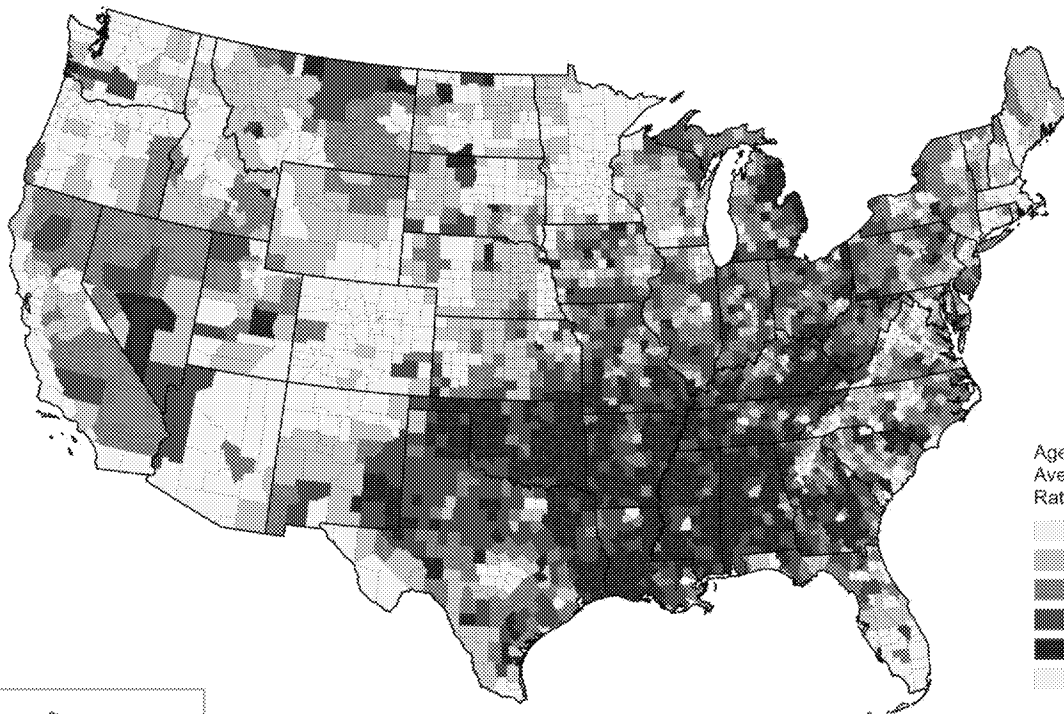


Source: America's Health Rankings (2021)

Stroke Death Rates, 2015 - 2017 Adults, Ages 35+, by County



Heart Disease Death Rates, 2017 - 2019 Adults, Ages 35+, by County



Age-Adjusted
Average Annual
Rates per 100,000

52.7 - 283.1

283.2 - 322.1

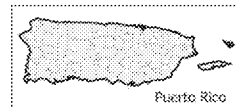
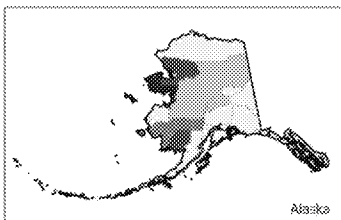
322.2 - 360.9

361.0 - 416.0

416.1 - 810.5

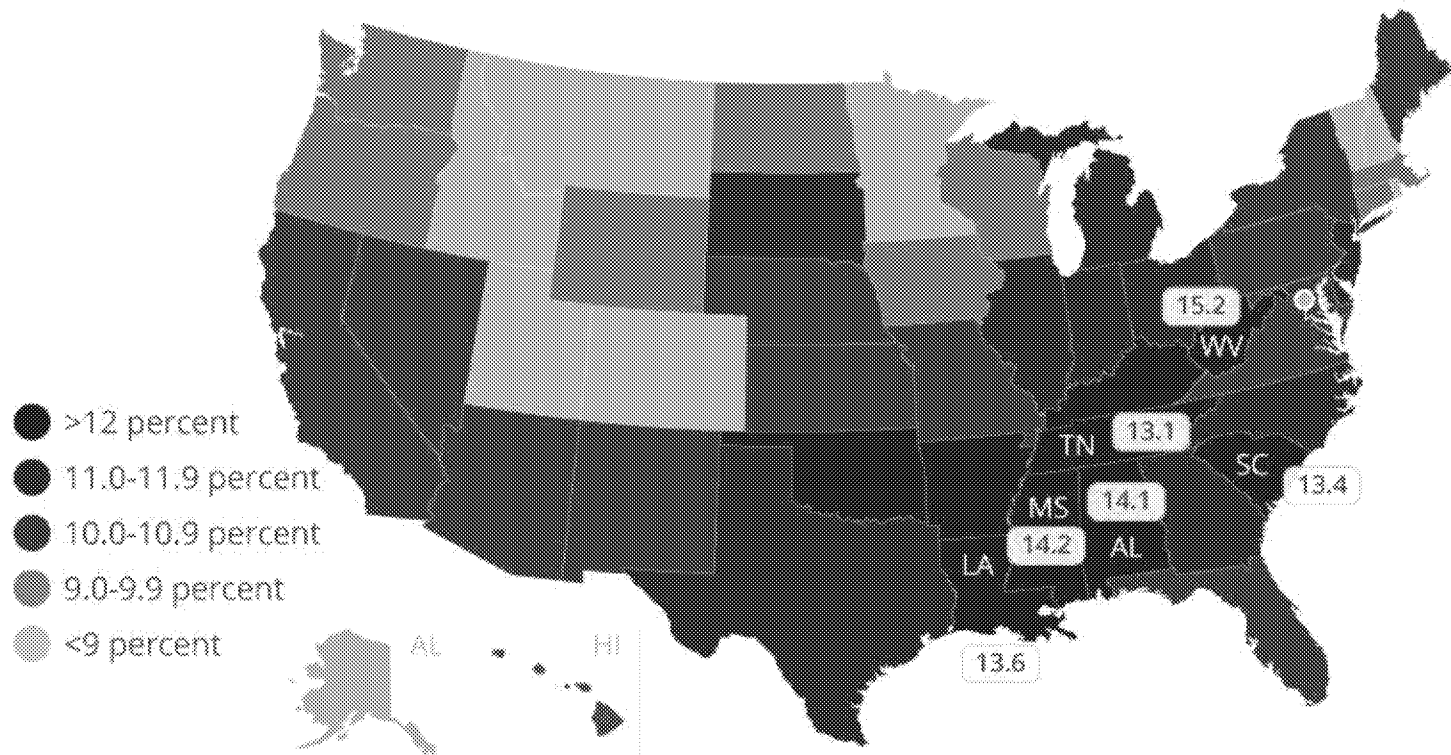
Insufficient Data

Data source and
methodology found at:
[www.cdc.gov/dhdp/maps/
atlas/statistical-methods](http://www.cdc.gov/dhdp/maps/atlas/statistical-methods)



Where Diabetes is Most Prevalent in the U.S.

Percent of adults who have ever been told by a doctor that they have diabetes (2017*)



Includes pregnancy-related diabetes, percentages are weighted to reflect population characteristics (e.g. average age)

* latest on record

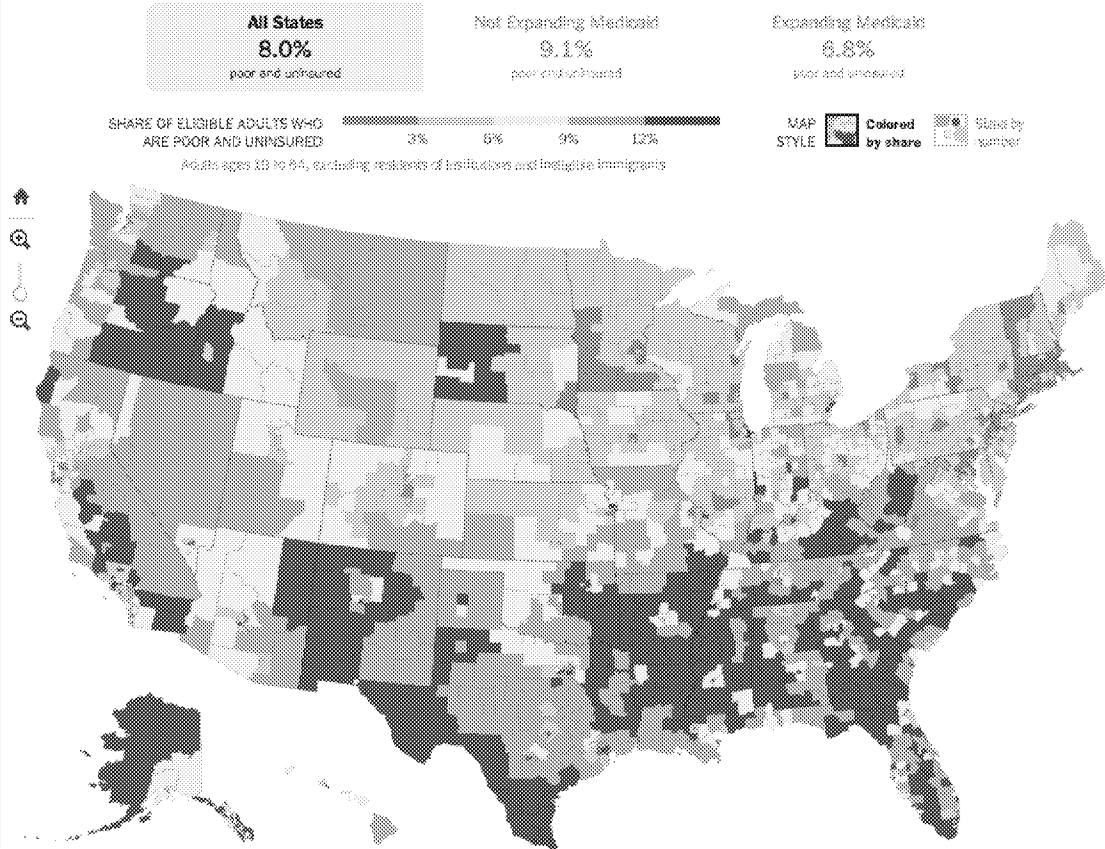


@StatistaCharts

Sources: Kaiser Family Foundation, CDC

Where Poor and Uninsured Americans Live

The 26 Republican-dominated states that are not participating in a vast expansion of Medicaid are home to a disproportionate share of the nation's poorest uninsured citizens. Eight million Americans will be stranded without insurance, stuck between people with slightly higher incomes who will qualify for federal subsidies on the new health exchanges that went live this week, and those who are poor enough to qualify for Medicaid in its current form.

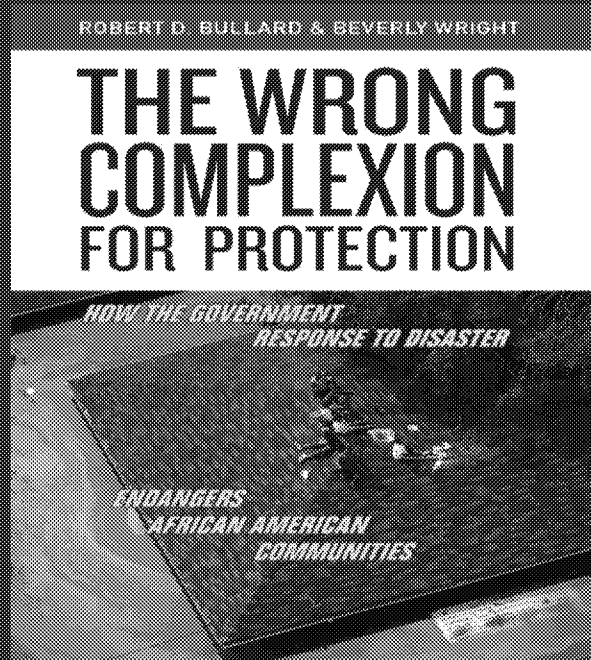




CLIMATE CHANGE

**HAS GOVERNMENT
RESPONSE TO
ENVIRONMENTAL
THREATS BEEN ?**

Some Communities Have the Wrong Complexion for Protection

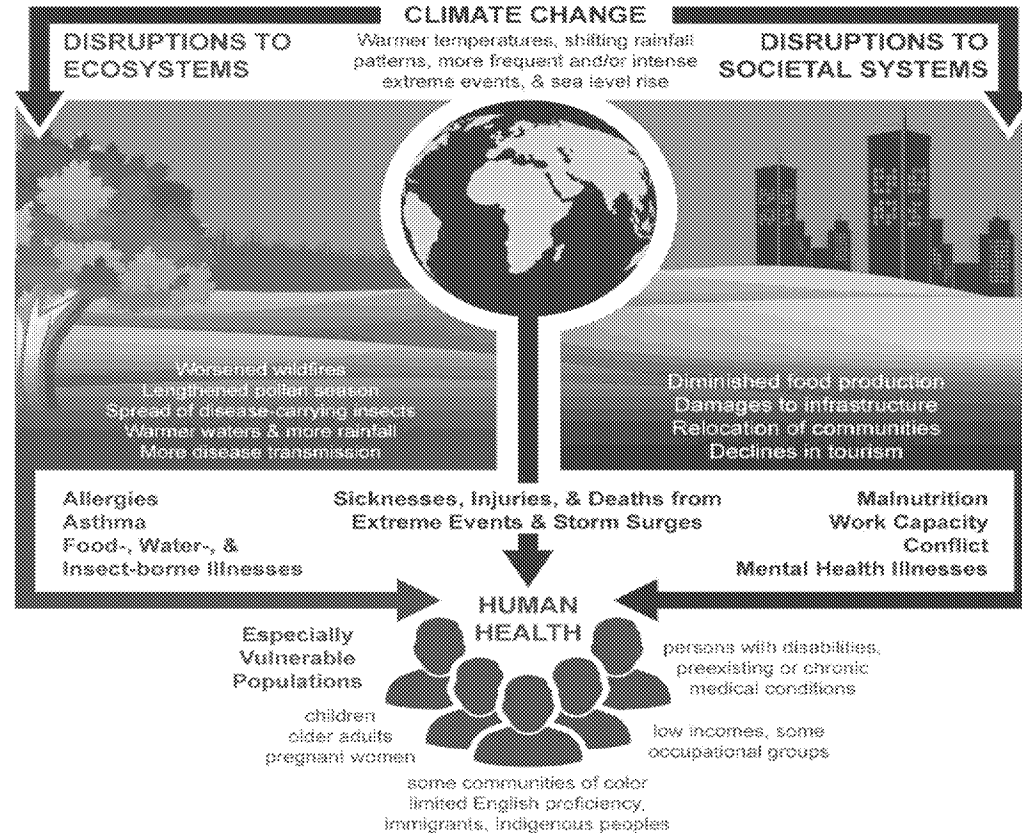


- Long before Hurricane Katrina devastated the US Gulf Coast, people of color learned the hard way that waiting for the government to respond can be hazardous to their health and the health of their communities
- Government response to natural and human-made disasters over the past eight decades has not treated all communities equally and fairly

**This past summer, about
Americans faced a
weather disaster, according
to the Washington Post**

CLIMATE CRISIS IS A
PUBLIC HEALTH THREAT

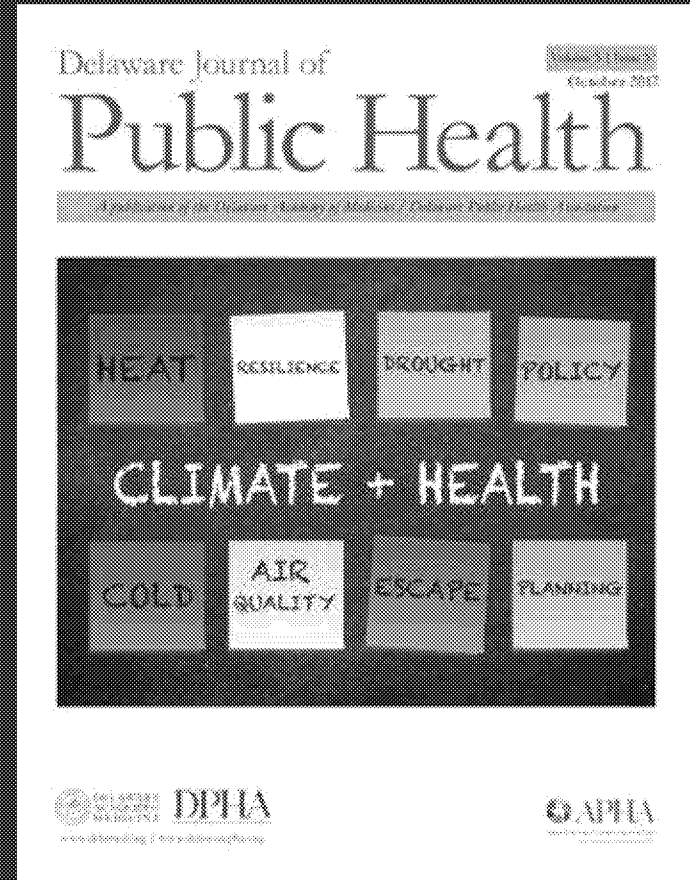
The Impacts of Climate Change on Human Health



Climate Change Threatens Mental Health

- The American Public Health Association estimates $\frac{1}{4}$ of individuals exposed to extreme weather disasters are at risk of adverse mental health effects.
- More than $\frac{1}{3}$ of adults and $\frac{1}{2}$ of children suffer depression after a natural disaster.

Source: APHA (2021)



CLIMATE CHANGE WILL EXACERBATE
INEQUITIES AND VULNERABILITIES
OF ALREADY MARGINALIZED
COMMUNITIES

Air Pollution & Increasing Allergens

Asthma, cardiovascular disease,
respiratory allergies

Extreme Heat

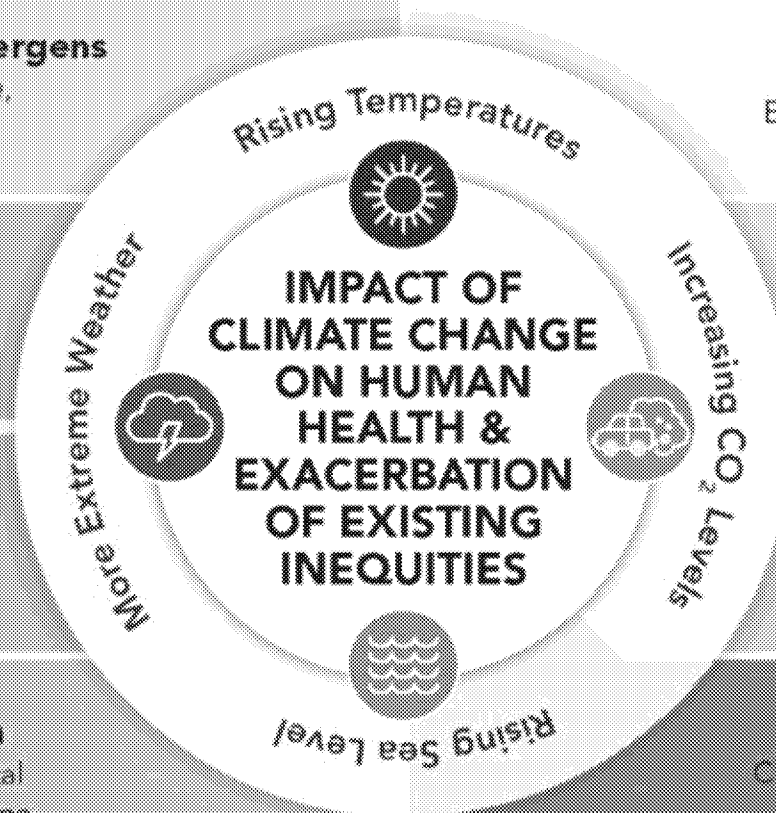
Heat-related illness and death,
cardiovascular failure

Severe Weather

Injuries, fatalities, loss of homes,
mental health impacts

Environmental Degradation

Forced migration, civil conflict, mental
health impacts, loss of jobs and income



Degraded Living Conditions & Social Inequities

Exacerbation of existing social and health
inequities and vulnerabilities

Changes In Vector Ecology

Malaria, dengue, encephalitis,
hantavirus, Rift Valley fever, Lyme
disease, chikungunya, West Nile virus

Water & Food Supply Impacts

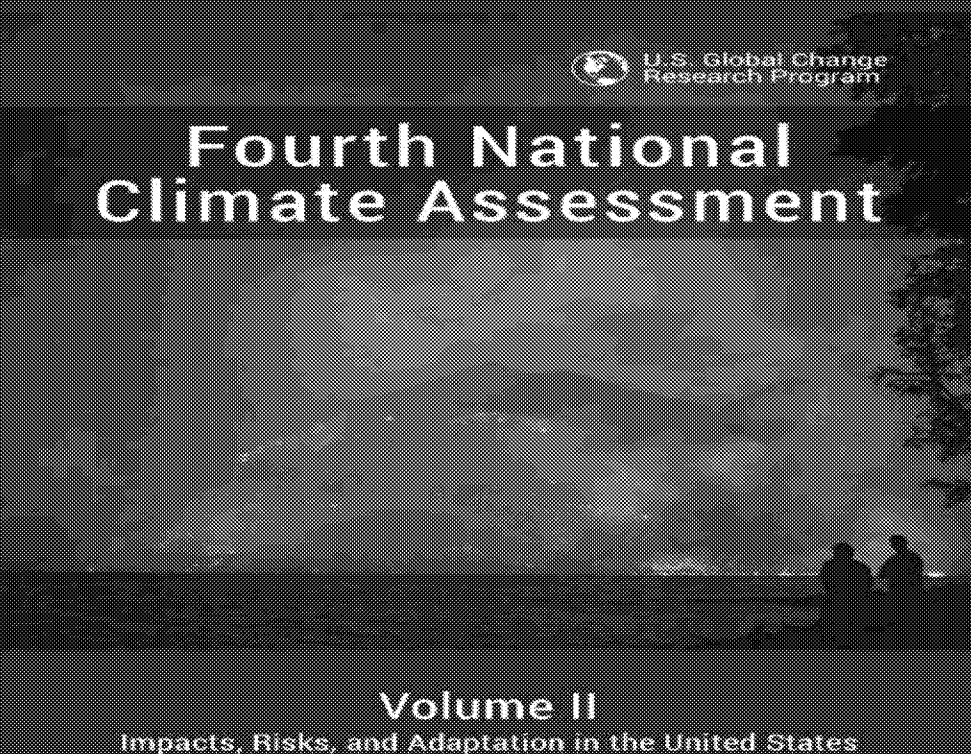
Malnutrition, diarrheal disease

Water Quality Impacts

Cholera, cryptosporidiosis, Campylobacter,
leptospirosis, harmful algal blooms

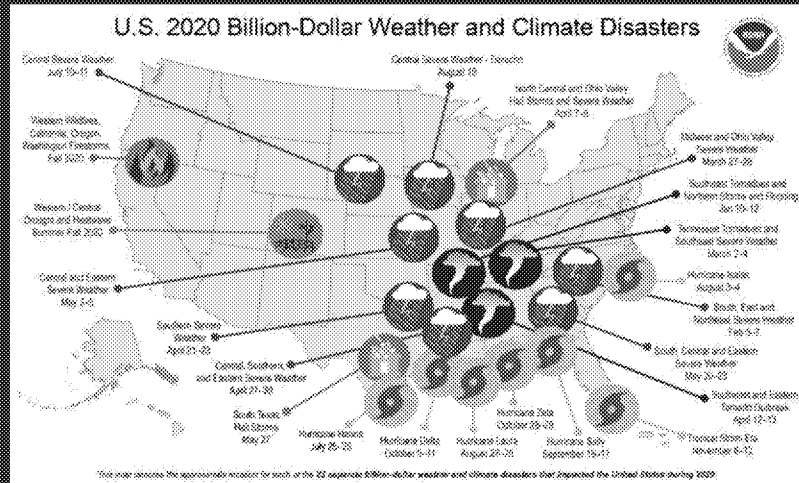
Adapted from CDC, J. Patz

Most Vulnerable Regions in the US



- The 2018 *National Climate Assessment* (NCA4) states, “climate change creates new risks and exacerbates existing vulnerabilities in communities across the United States, presenting growing challenges to human health and safety, quality of life, and the rate of economic growth.”
- Severe weather events and climate-related disasters in the south have outnumbered similar events in other areas of the US annually in both scale and magnitude by a during the past 10 years.
- The Southeast for the period 1980-2020 had more billion-dollar disasters than all other regions.

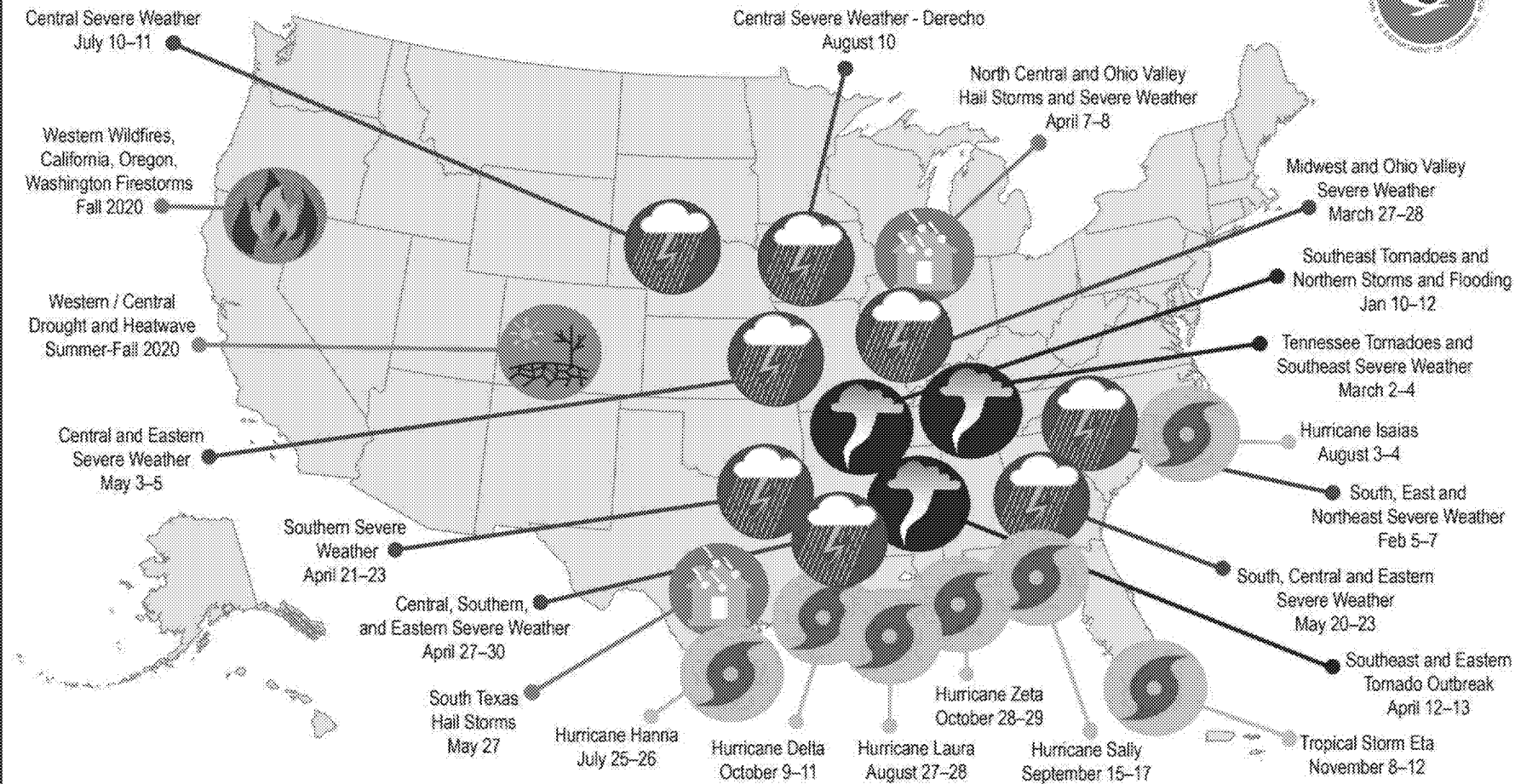
THE COST OF EXTREME WEATHER



- NOAA estimates 298 billion-dollar extreme weather events totaled \$1.975 trillion in damages and costs since 1980
- Extreme weather event t American taxpayers \$99 billion in 20210

(Source: NOAA (2021))

U.S. 2020 Billion-Dollar Weather and Climate Disasters

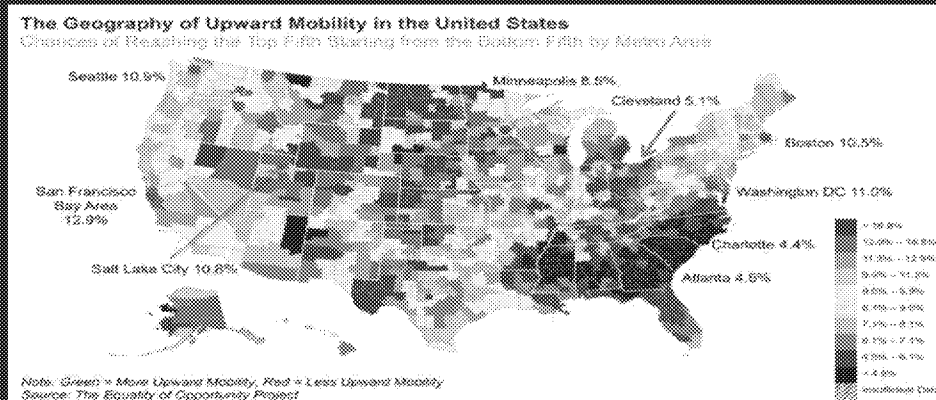


This map denotes the approximate location for each of the 22 separate billion-dollar weather and climate disasters that impacted the United States during 2020.

**CLIMATE CHANGE WILL
WIDEN
AND GAP**

Income Inequality in the U.S.

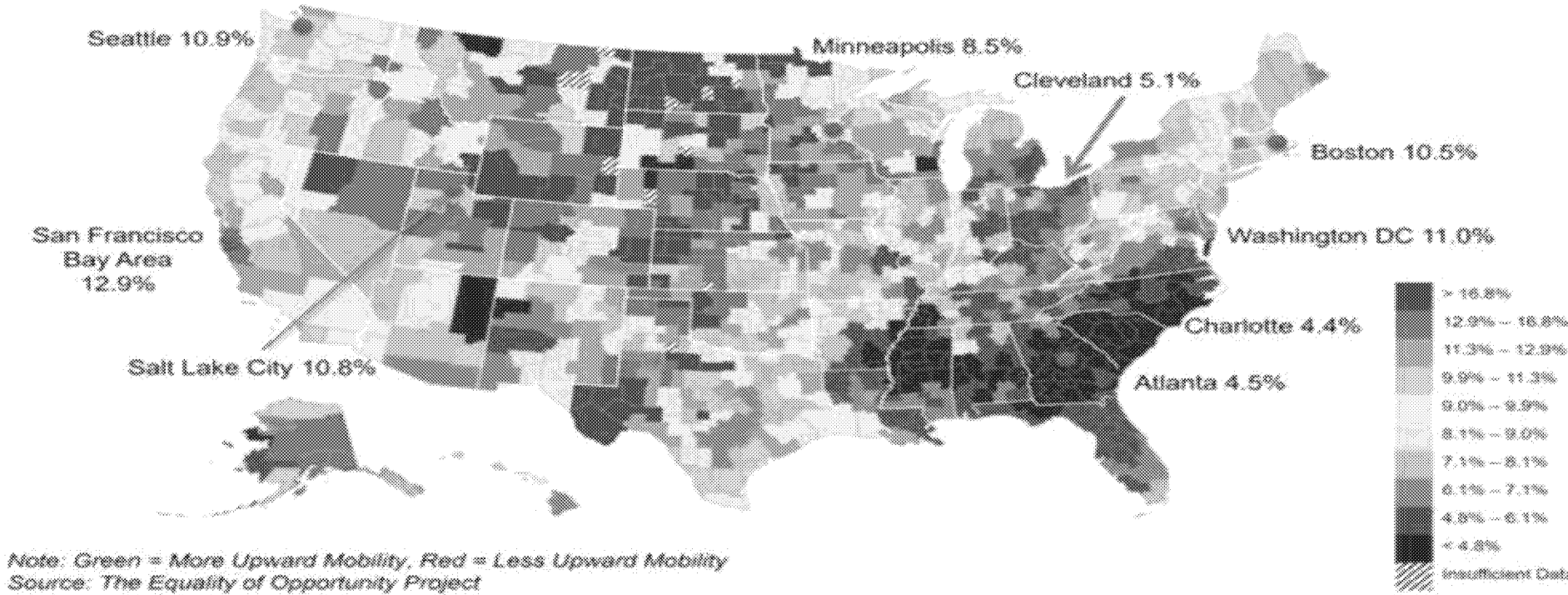
- Income inequality is found all over the map of the United States
- It is especially problematic in the Deep South (with 11 of the 20 states with the highest income inequality)



Source: Chetty (2018)

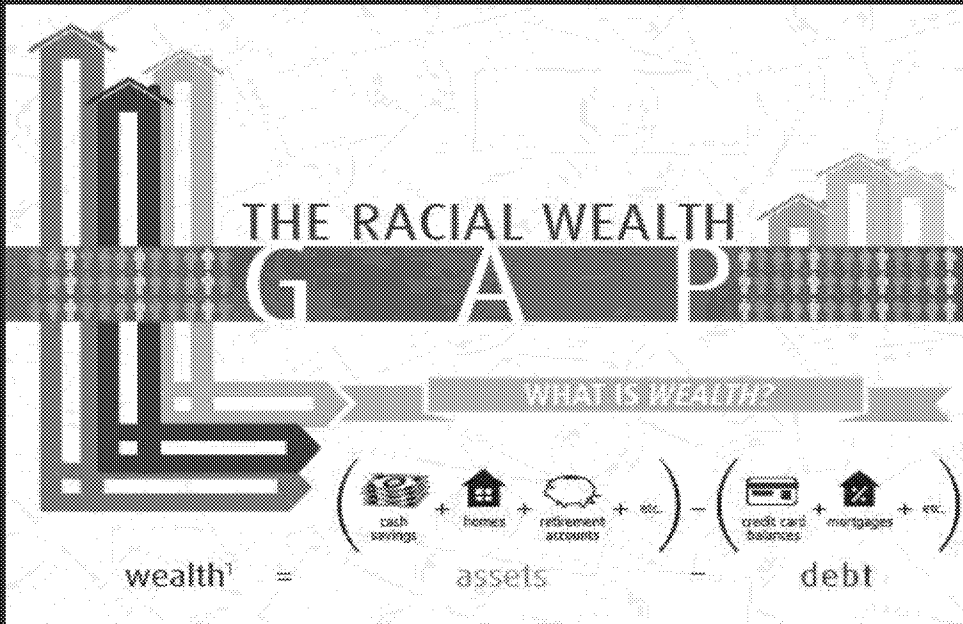
The Geography of Upward Mobility in the United States

Chances of Reaching the Top Fifth Starting from the Bottom Fifth by Metro Area



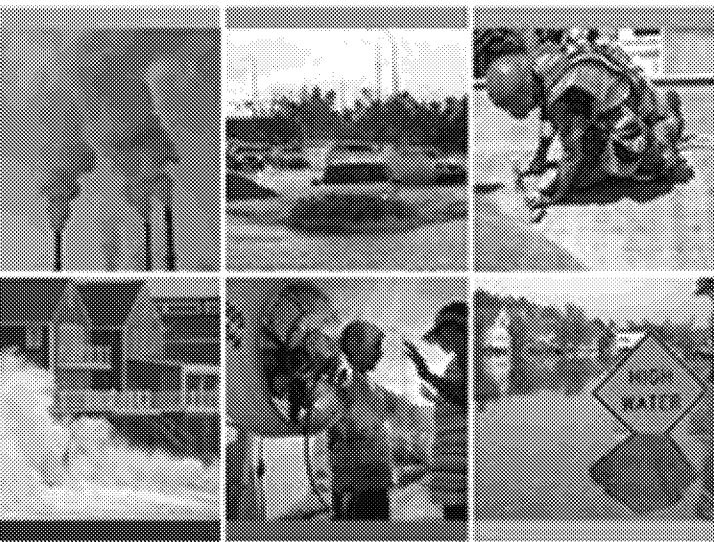
Source: Chetty (2018)

Racial Wealth Inequality



- Black wealth is roughly of white wealth.
- In 2016, the median wealth for black and Hispanic families was and , respectively, compared with white families' median wealth of .

Source: Solomon and Weller (2018)



CLIMATE CHANGE AND SOCIAL VULNERABILITY IN THE UNITED STATES

A Focus on Six Impacts

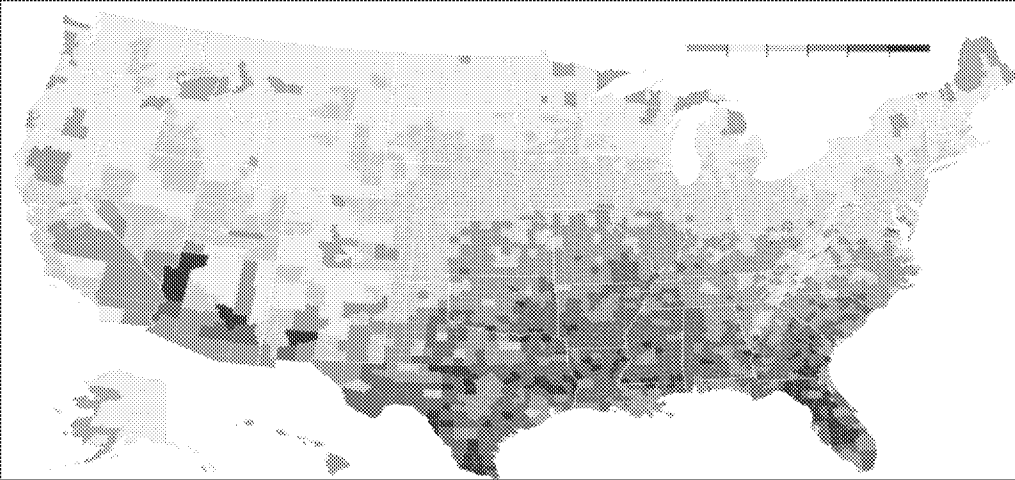
SEPTEMBER 2021

Climate Change Hits People of Color Hardest

- Climate change impacts fall disproportionately on people of color communities who are least able to prepare for, and recover from, heat waves, poor air quality, flooding, and other impacts, according to a 2021 EPA report
- Black Americans are more likely to currently live in areas with the highest projected increases in childhood asthma diagnoses and more likely to currently live in areas with the highest projected increases in extreme temperature related deaths.
- Latinos are more likely to live in communities that would lose work hours due to intense heat and more likely to live in areas with the highest estimated increases in traffic delays due to coastal flooding
- American Indians and Alaska Natives are more likely to live in areas that will be inundated by flooding from sea level rise

Source: US EPA (2021)

Climate Change Will Hit Poor and People of Color in the South Hardest



- A 2017 UC Berkeley study found without effective climate action, the nation, as a whole, could see as much as $+1^{\circ}\text{C}$ shaved off of its GDP per average by the end of this century
- Parts of the American South hit hardest with up to a drop in economic activity due to global warming by the end of the century

Source: Hsiang, Kopp, Jena, Rising, et al. (2017)

CLIMATE CHANGE WILL WIDEN
THE ENVIRONMENTAL
PROTECTION GAP

Toxic Wastes and Race at Twenty: 1987-2007

Grassroots Struggles to Dismantle Environmental Racism in the United States



Source: Bullard et. al (2007)

Toxic Waste and Race

- Race is a significant predictor of commercial hazardous waste locations.
- People of color make up most (56 percent) of those living in neighborhoods within two miles of commercial hazardous waste facilities.
- People of color make up over two-thirds (69 percent) of those living near clustered facilities.
- People of color are more concentrated in areas with commercial hazardous sites in 2007 than in 1987.

Source: Bullard et al. (2007)

Dumping on Black Middle Class



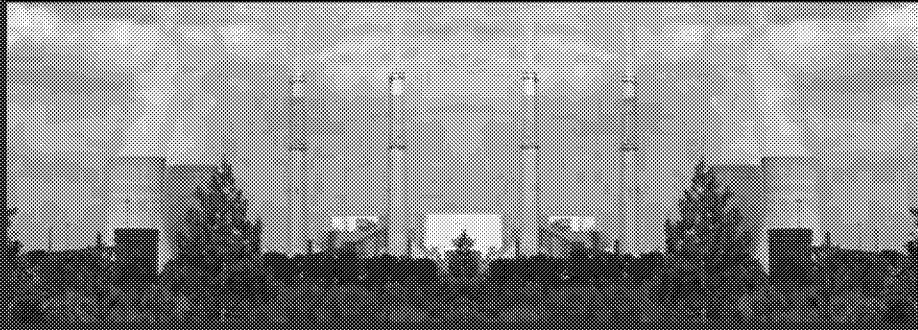
- Unequal burden of pollution cannot be reduced to a "poverty thing"
- Black households with incomes between _____ live in neighborhoods that are more polluted than the average neighborhood in which white households with incomes below _____ live

Source: Downey and Hawkins (2008)

"Coal Blooded" Power Plants

Coal Blooded

Putting Profits Before People



- Two million people live within three miles of the top twelve "dirtiest" coal fired power plants
- of these residents are people of color and the average per capita income is \$14,626, compared with the national average of \$21,587
- People of color make up just only of the U.S. population in 2012

Source: NAACP (2012)

Getting Off Coal Saves Lives



More than 100,000 lives in the U.S. were saved from 2005-2016 with the closure of 334 coal-fired power plants.

Decommissioning of dirty coal plants was associated with reduced nearby pollution concentrations and reductions in mortality and increase in crop yield.

Source: Burney (2020)

Plant Closure = Fewer ER Visits

- Emergency room visits for asthma dropped the year after a Pittsburgh polluting power plant shut down
- After the Shenango power plant closed, the rate of physician-diagnosed asthma in elementary school students in the region decreased from 25.3 percent to 19.1 percent, and the rate of uncontrolled asthma dropped from 64.9 percent to 37.9 percent.

Source: Allegheny County Health Department (2018)

Power Plant Pollution Tied to Premature Births



- Prevalence of preterm birth decreased significantly near power plants after they closed, with larger decreases in women who lived closer to the plants.
- For women living within three miles of the plants, the preterm birthrate was 5.1 percent after closing compared with 7.0 percent before.

Source: Casey (2018)

Polluting Kids in the Womb



- A 2018 study from Johns Hopkins University shows air pollution during pregnancy is tied to high blood pressure in children
- Half of the U.S. adults now have high blood pressure
- African Americans have higher rates of high blood pressure than whites

Source: Zhang et al. (2018)

Air Toxics Linked to Student Academic Performance



- researchers nearly a decade ago found a clear link between toxics near schools and student academic performance in Los Angeles (Pastor et al. 2006)
- In , schools located in areas with the highest air pollution levels had the lowest attendance rates and the highest proportions of students who failed to meet state educational testing standards (Mohai et al. 2011)
- In , residential exposure to air toxics was linked to lower grade point averages among school children (Clark-Reyna et al. 2016)



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Living with More Pollution



- Black people are more likely than white people to live where industrial pollution poses the greatest health danger
- Black people in states are more than twice as likely as white people to live in neighborhoods with high pollution levels
- Similar pattern for other groups:
 - Hispanic population in states
 - Asian population in states

Source: Associated Press (2005)

Dumping on Black Middle Class



- Unequal burden of pollution cannot be reduced to a “poverty thing”
- Black households with incomes between _____ live in neighborhoods that are more polluted than the average neighborhood in which white households with incomes below _____ live

Source: Downey and Hawkins (2008)

Who is Most Likely to Get Polluted?



- EPA found in _____, people of color live with more air pollution than whites
- African Americans are exposed to times more fine particulate matter than white populations
- Hispanic people are exposed to times
- Those below poverty are exposed times more than those above poverty

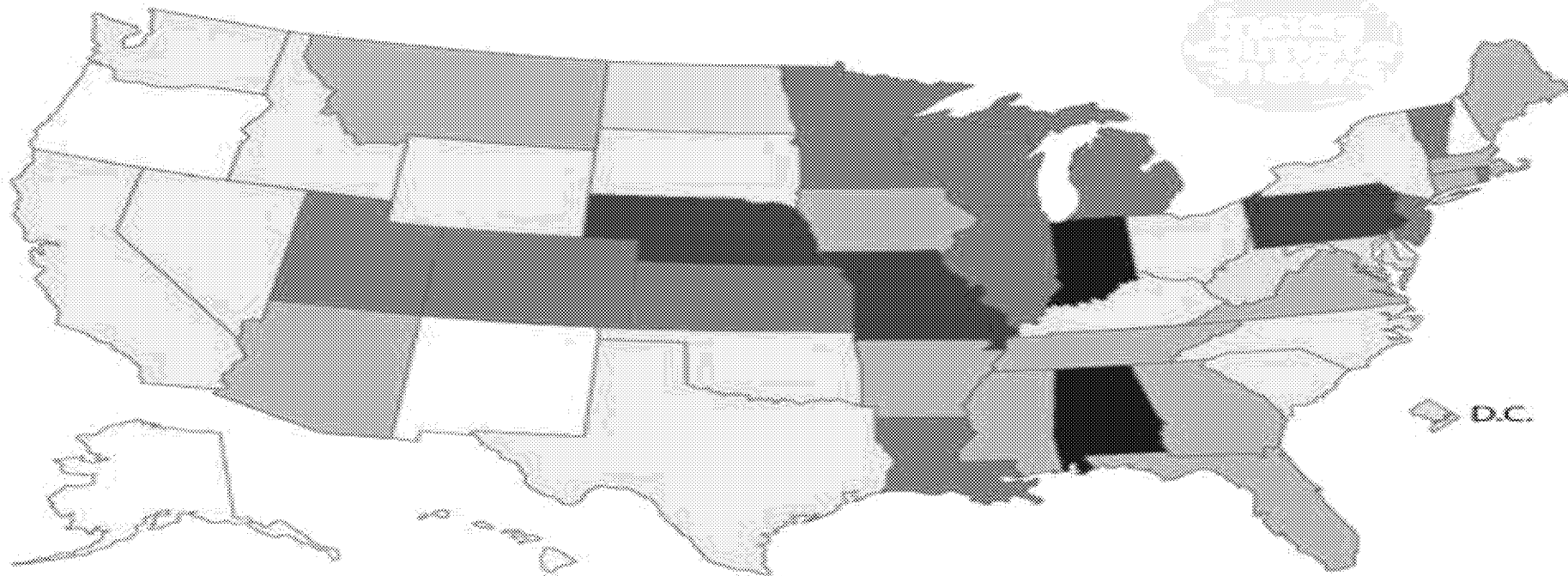
Source: Mikati et al. (2018)

People of Color Bear Greater Air Pollution Burden

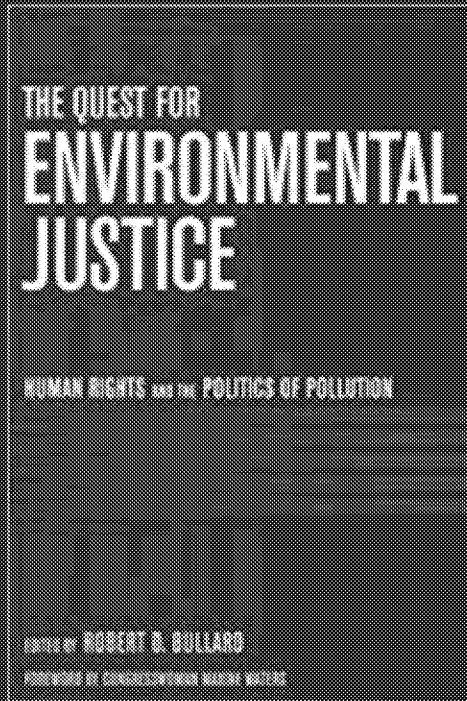
Non-white people face higher exposure to particulate matter air pollution than white people do in all but four states (Maryland, New Mexico, North Dakota and West Virginia) and Washington, D.C. People of color living in Indiana and Alabama are exposed to roughly twice as much particulate pollution than white people.

PROPORTIONAL PARTICULATE MATTER (PM_{2.5}) BURDEN, NONWHITE

0.78-0.94 0.95-1.04 1.05-1.24 1.25-1.49 1.50-1.74 1.75-1.99 2.00-2.11



THE QUEST FOR JUSTICE



America is segregated, and so is pollution:

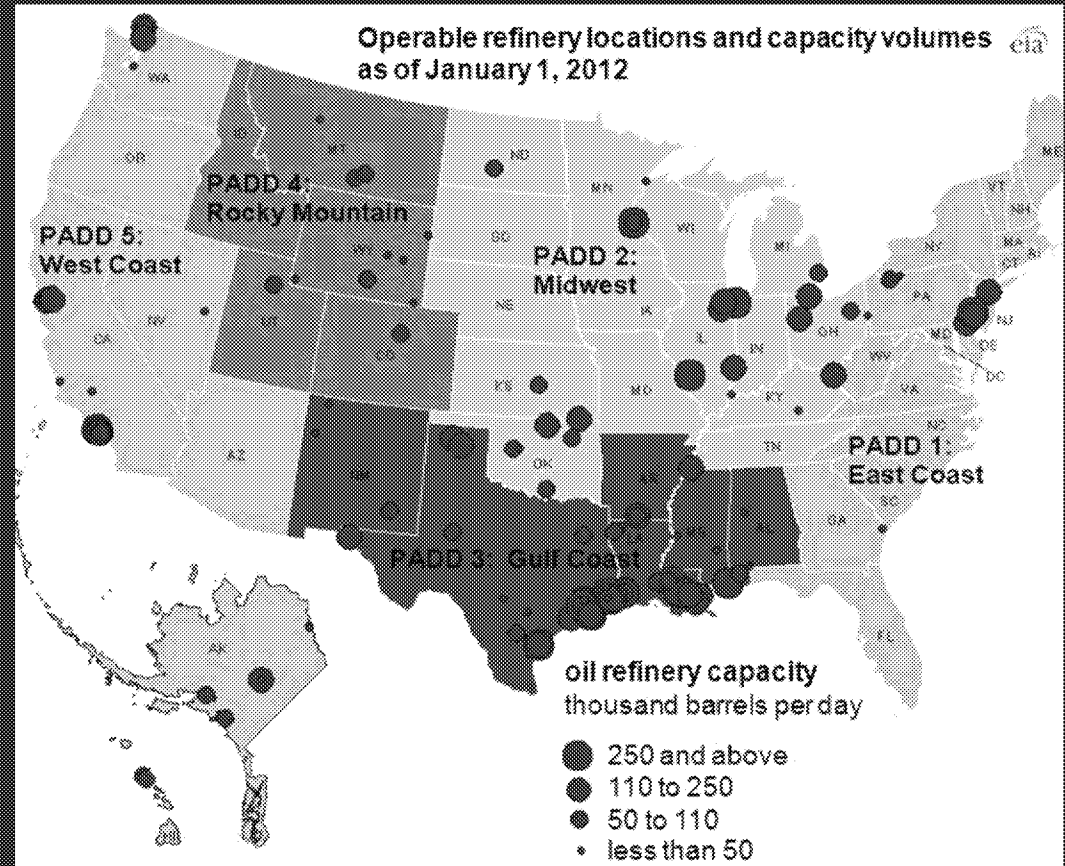
- Campaigns need to focus not only on but also on to achieve environmental, climate, energy, economic, food and water, and health, especially for frontline and fence-line communities that have been environmentally and economically left behind by

⋮
**ADDRESSING LEGACY OF
WHERE AND
GET DISTRIBUTED
FROM**

Geography of U.S. Oil Refineries

- In addition to greenhouse gases, the 139 U.S. oil refineries operating in 32 states emit thousands of tons of hazardous air pollutants, including substances that cause cancer.
- Half of the people that are at an increased cancer risks from refinery pollution are people of color.

Source: Garcia (2014)



13 Refineries Emitting Harmful Benzene



- A 2021 Environmental Integrity Project study found 13 U.S. refineries Emit dangerous benzene pollution that exceeds the EPA's "action level."
- More than 330,000 people live within three miles of these 13 refineries of which are people of color and live below the poverty line.



**: OIL & GAS INDUSTRY
HAS CREATED AN

IN FENCELINE AND
FRONTLINE COMMUNITIES**

Oil & Gas Industry Has Diversity Problem



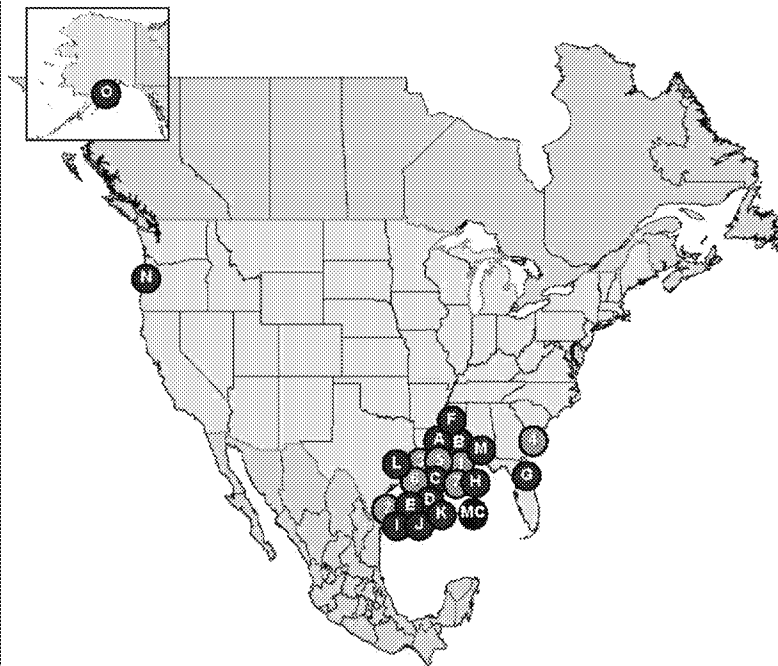
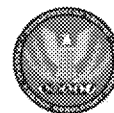
- The energy sector has representation of Hispanic or Latinx workers and Black or African American workers
- of energy workers are Black or African American compared to a national workforce average
- Hispanic or Latinx individuals comprise of energy workers, despite representing of the national labor force

Source: National Association of State Energy Officials (2021)




SITING PRESENTS NEW ENVIRONMENTAL JUSTICE CHALLENGES

North American LNG Export Terminals

Approved, Not Yet Built



U.S. Jurisdiction & Status

-  FERC - Approved, Under Construction
-  FERC - Approved, Not Under Construction
-  MARAD / U.S. Coast Guard

Export Terminals

UNITED STATES

APPROVED - UNDER CONSTRUCTION - FERC

1. Hackberry, LA: .71 Bcfd (Semptra-Cameron LNG Train 3) (CP13-25)
2. Corpus Christi, TX: 0.72 Bcfd (Cheniere-Corpus Christi LNG Train 2) (CP12-507)
3. Sabine Pass, LA: 0.7 Bcfd Train 6 (Sabine Pass Liquefaction) (CP13-552)
4. Elba Island, GA: 140 MMcfd (Southern LNG Company Units 7-10) (CP14-103)
5. Cameron Parish, LA: 1.41 Bcfd (Venture Global Calcasieu Pass) (CP15-550)
6. Sabine Pass, TX: 2.1 Bcfd (ExxonMobil - Golden Pass) (CP14-517)
7. Calcasieu Parish, LA: 4.0 Bcfd (Driftwood LNG) (CP17-117)

APPROVED - NOT UNDER CONSTRUCTION - FERC

- A. Lake Charles, LA: 2.2 Bcfd (Lake Charles LNG) (CP14-120)
- B. Lake Charles, LA: 1.08 Bcfd (Magnolia LNG) (CP14-347)
- C. Hackberry, LA: 1.41 Bcfd (Semptra - Cameron LNG Trains 4 & 5) (CP15-560)
- D. Port Arthur, TX: 1.86 Bcfd (Port Arthur LNG Trains 1 & 2) (CP17-20)
- E. Freeport, TX: 0.72 Bcfd (Freeport LNG Dev Train 4) (CP17-470)
- F. Pascagoula, MS: 1.5 Bcfd (Gulf LNG Liquefaction) (CP15-521)
- G. Jacksonville, FL: 0.132 Bcfd (Eagle LNG Partners) (CP17-41)
- H. Plaquemines Parish, LA: 3.40 Bcfd (Venture Global LNG) (CP17-66)
- I. Brownsville, TX: 0.55 Bcfd (Texas LNG Brownsville) (CP16-116)
- J. Brownsville, TX: 3.6 Bcfd (Rio Grande LNG - NextDecade) (CP16-454)
- K. Brownsville, TX: 0.9 Bcfd (Annova LNG Brownsville) (CP16-480)
- L. Corpus Christi, TX: 1.86 Bcfd (Cheniere Corpus Christi LNG) (CP18-512)
- M. Sabine Pass, LA: NA Bcfd (Sabine Pass Liquefaction) (CP19-11)
- N. Coos Bay, OR: 1.08 Bcfd (Jordan Cove) (CP17-494)
- O. Nikiski, AK: 2.63 Bcfd (Alaska Gasline) (CP17-178)

APPROVED - NOT UNDER CONSTRUCTION - MARAD/Coast Guard

- MC. Gulf of Mexico: 1.8 Bcfd (Delfin LNG)

CANADA

For Canadian LNG Import and Proposed Export Facilities:

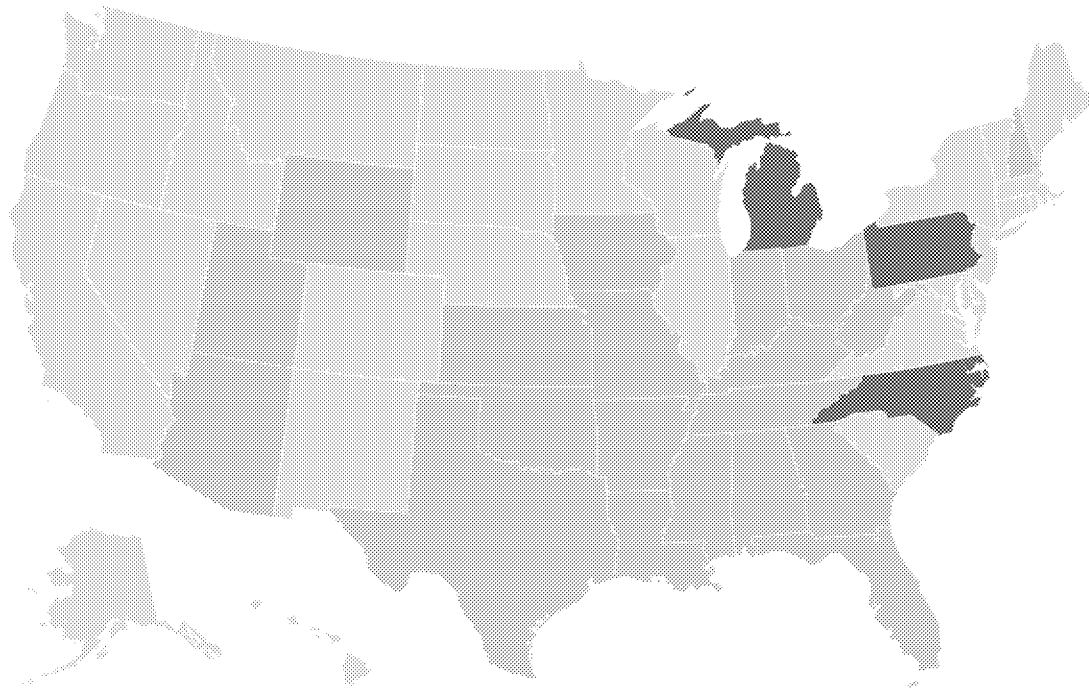
<https://www.nrcan.gc.ca/energy/natural-gas/5683>

As of May 29, 2020

New laws block cities from curbing natural gas

Where state governments are blocking local climate action on natural gas in buildings

■ Passed preemption law prohibiting natural gas bans ■ Introduced
preemption bill



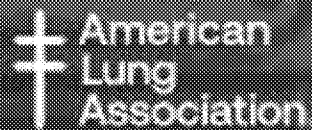
Source: NRDC analysis, September 2021.

Vex

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State of the Air – 2021



State of the Air
2021 

- The American Lung Association finds more than 4 in 10 people (135 million) in the U.S. live with polluted air, placing their health and lives at risk.
- People of color are more likely to live in a county with unhealthy air than white people, and more likely to live in a county that failed all three air quality grades.

Inequality in the Air We Breathe

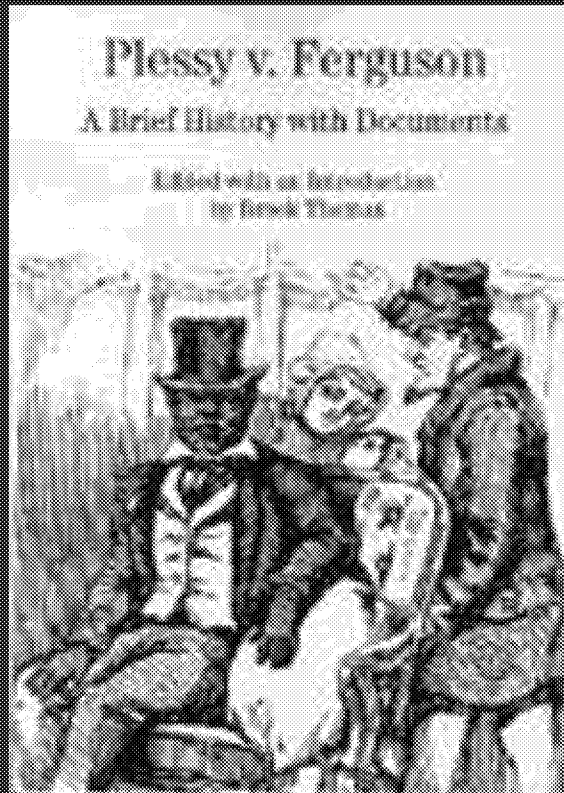
**I
CAN'T
BREATHE**

University of Minnesota
researchers found people
of color breathe
more nitrogen
dioxide than white people

Source: Clark, Millet, and Marshall (2014)

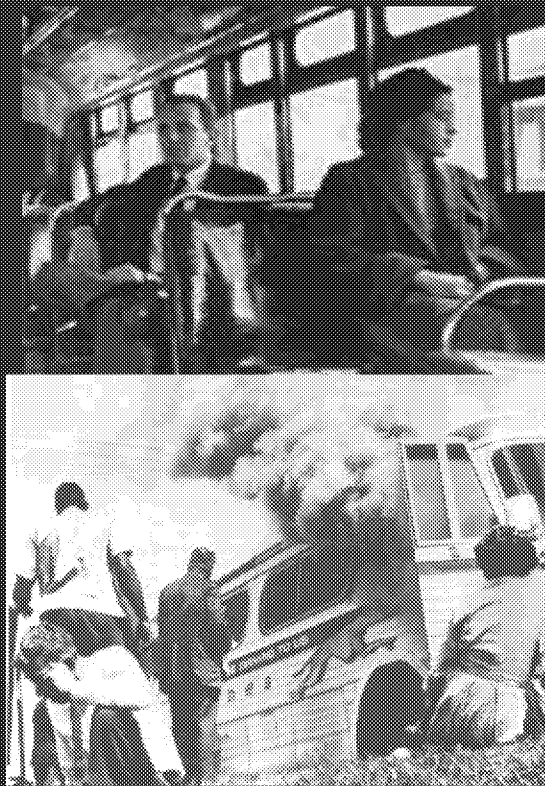
THE OF PLANNING, POLICIES, AND FINANCING CREATED

Transportation and Civil Rights



- Transportation and Civil Rights have been linked for more than a century
- The U.S. Supreme Court Plessy v. Ferguson decision codified "Jim Crow" segregation

Assault on Transportation Apartheid



- The U.S. Supreme Court overturned Plessy in *Brown v. Board of Education of Topeka*
- The racist system was later challenged by Rosa Parks in *1955* and the Montgomery Boycott
- Young John Lewis and other Freedom Riders placed their young lives on the line in *1961*

Civil Rights Act of 1964, Title VI



- "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."

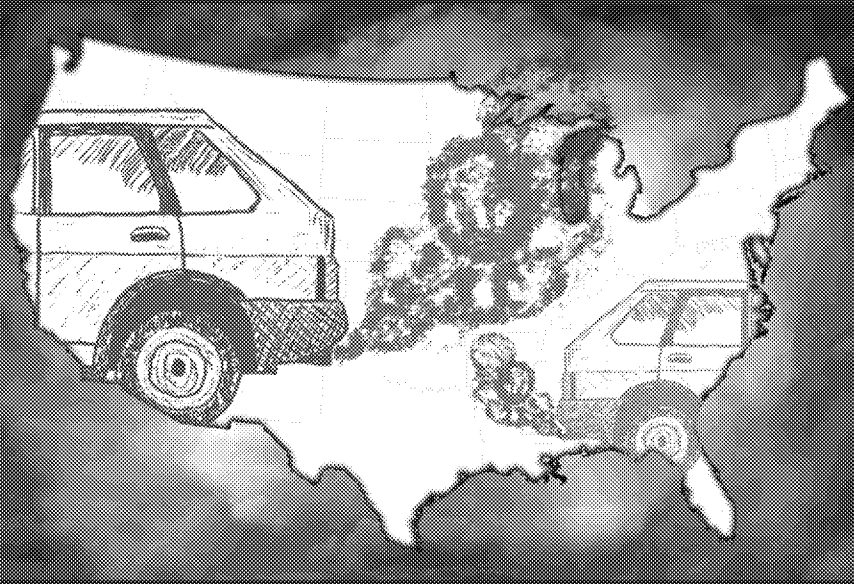
Transportation and Climate Change



- Transportation accounts for the largest portion (28%) of greenhouse gas emissions in the U.S.
- The majority of transportation greenhouse gas emissions are from light-duty vehicles
- The health and economic impacts of climate change fall disproportionately on low income and people of color households

Source: U.S. EPA (2020)

Transportation and Health Justice



- According to the EPA, more than 20,000 Americans die prematurely every year from motor vehicle pollution on our roads and highways
- Accelerating to 100% clean zero emitting vehicles will save lives, advance justice and create good paying jobs

Source: EPA (2020); EDF (2020)

Benefits of Reducing Emissions



- EPA programs to reduce transportation emissions have resulted in less smog and soot, significantly better air quality and better health for Americans
- By 2030, EPA air quality emissions standards for vehicles are projected to annually prevent, premature deaths, avoided hospitalizations, and work days lost

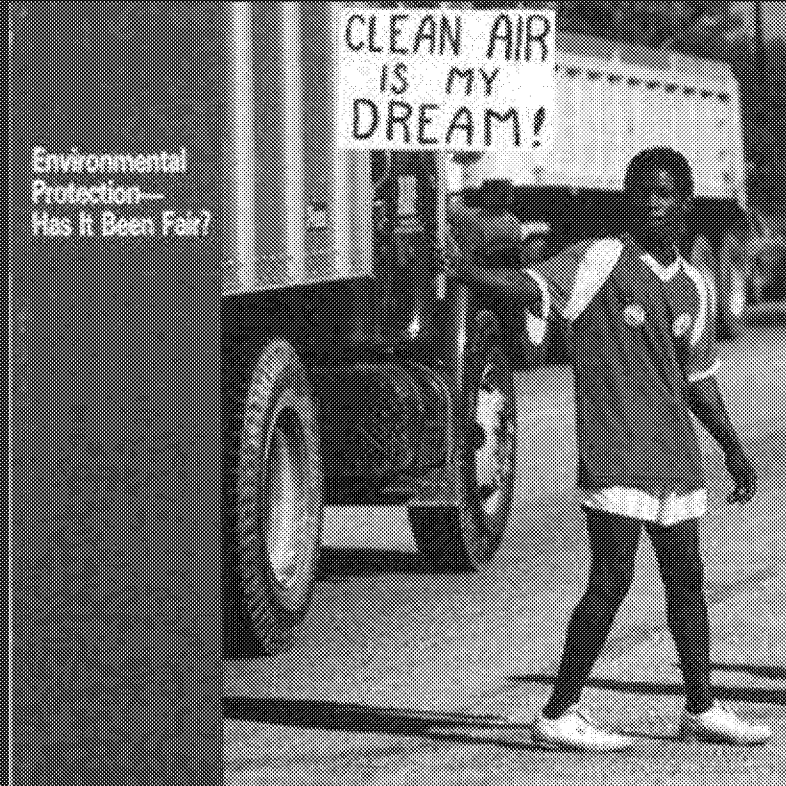
Breathing Other People's Pollution



- Black and Latino populations are disproportionately “burdened” with breathing air that's been polluted by white populations.
- Black populations are exposed to more pollution than caused by their consumption.
- Latino populations are exposed to more pollution than they cause.
- White populations enjoy a “pollution advantage,” meaning they breathe less air pollution than they cause.

Source: Tessum et al. (2019)

People of Color Face More Pollution



- Fine particulate pollution (PM_{2.5}) such as soot, dust or smoke causes between 85,000 to 200,000 deaths in the United States each year
- People of color are disproportionately and systematically exposed to more deadly PM_{2.5} air pollution than Whites, regardless of location and income
- Black Americans in particular are exposed to higher than average levels of fine particulate pollution White Americans regardless of source

Source Tessum et al. (2021)

Particulate Matter and COVID-19



Image: © Vander Wolf-Images/istockphoto

- An April 2020 Harvard study found air pollution linked to higher COVID-19 deaths.
- Persons living in areas with high levels of fine particulate matter (PM_{2.5}) were more likely to die from the coronavirus than someone in a region with one unit less of the fine particulate pollution.

Source: Wu et al. (2020)

COVID-19 CASES, HOSPITALIZATION, AND DEATH BY RACE/ETHNICITY

FACTORS THAT INCREASE COMMUNITY SPREAD AND INDIVIDUAL RISK



CROWDED SITUATIONS



CLOSE / PHYSICAL CONTACT



ENCLOSED SPACE



DURATION OF EXPOSURE

Rate ratios compared to White, Non-Hispanic Persons	American Indian or Alaska Native, Non-Hispanic persons	Asian, Non-Hispanic persons	Black or African American, Non-Hispanic persons	Hispanic or Latino persons
CASES ¹	2.8x higher	1.1x higher	2.6x higher	2.8x higher
HOSPITALIZATION ²	5.3x higher	1.3x higher	4.7x higher	4.6x higher
DEATH ³	1.4x higher	No increase	2.1x higher	1.1x higher

Race and ethnicity are risk markers for other underlying conditions that impact health — including socioeconomic status, access to health care, and increased exposure to the virus due to occupation (e.g., frontline, essential, and critical infrastructure workers).

ACTIONS TO REDUCE RISK OF COVID-19



WEARING A MASK



SOCIAL DISTANCING
(6 FT GOAL)



HAND HYGIENE



CLEANING AND DISINFECTION

¹Data source: COVID-19 case-level data reported by state and territorial jurisdictions. Case-level data include about 80% of total reported cases. Numbers are unadjusted rate ratios.

²Data source: COVID-NET (<https://www.cdc.gov/coronavirus/2019-ncov/covid-data/covidview/index.html>), accessed 08/06/2020. Numbers are ratios of age-adjusted rates.

³Data source: NCHS Provisional Death Counts (<https://www.cdc.gov/nchs/nvsr/cmr/COVID19/index.html>), accessed 08/06/2020. Numbers are unadjusted rate ratios.

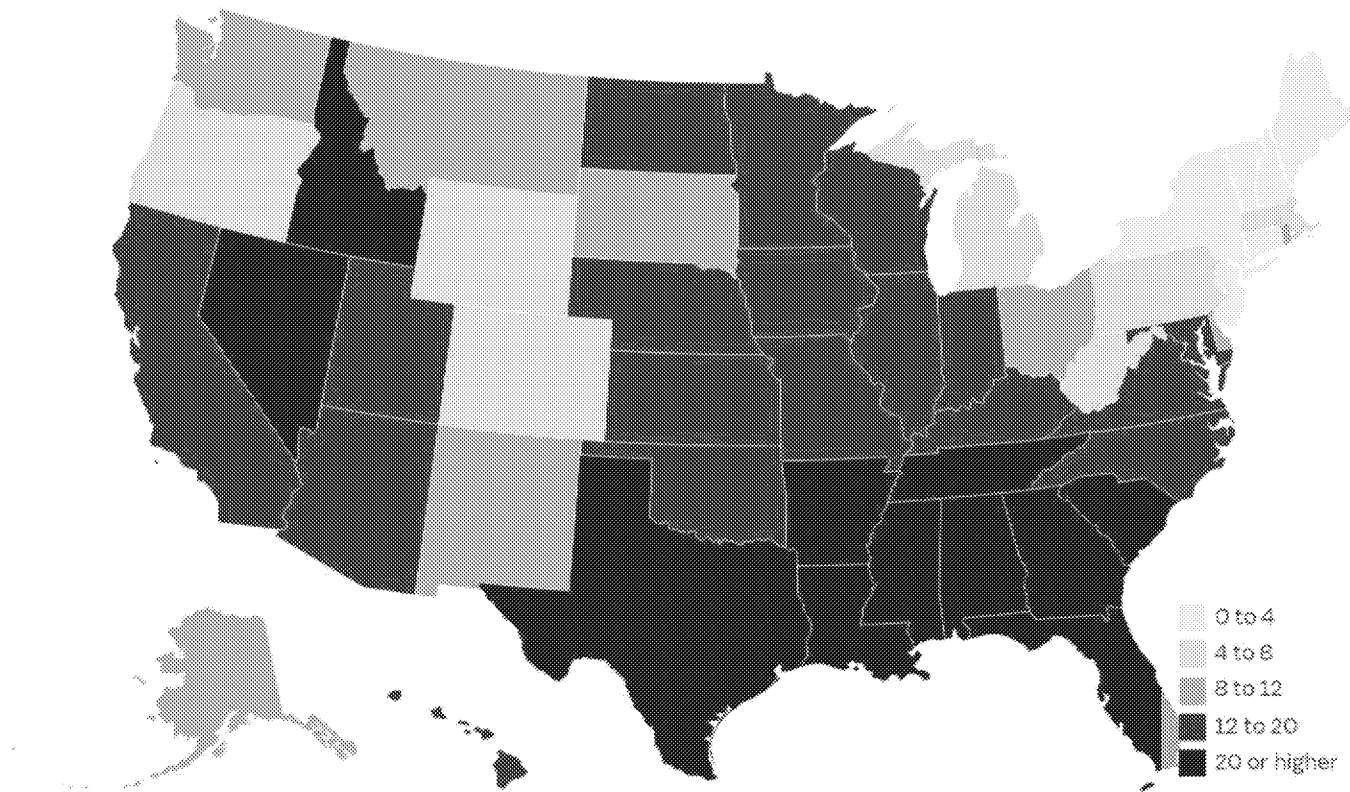
cdc.gov/coronavirus

COVID-19-08-06-2020

COVID-19 DELTA VARIANT IN THE UNITED STATES

Most states still have too many daily cases per capita

Daily new coronavirus cases were mostly above 4 per 100,000 people as of August 10

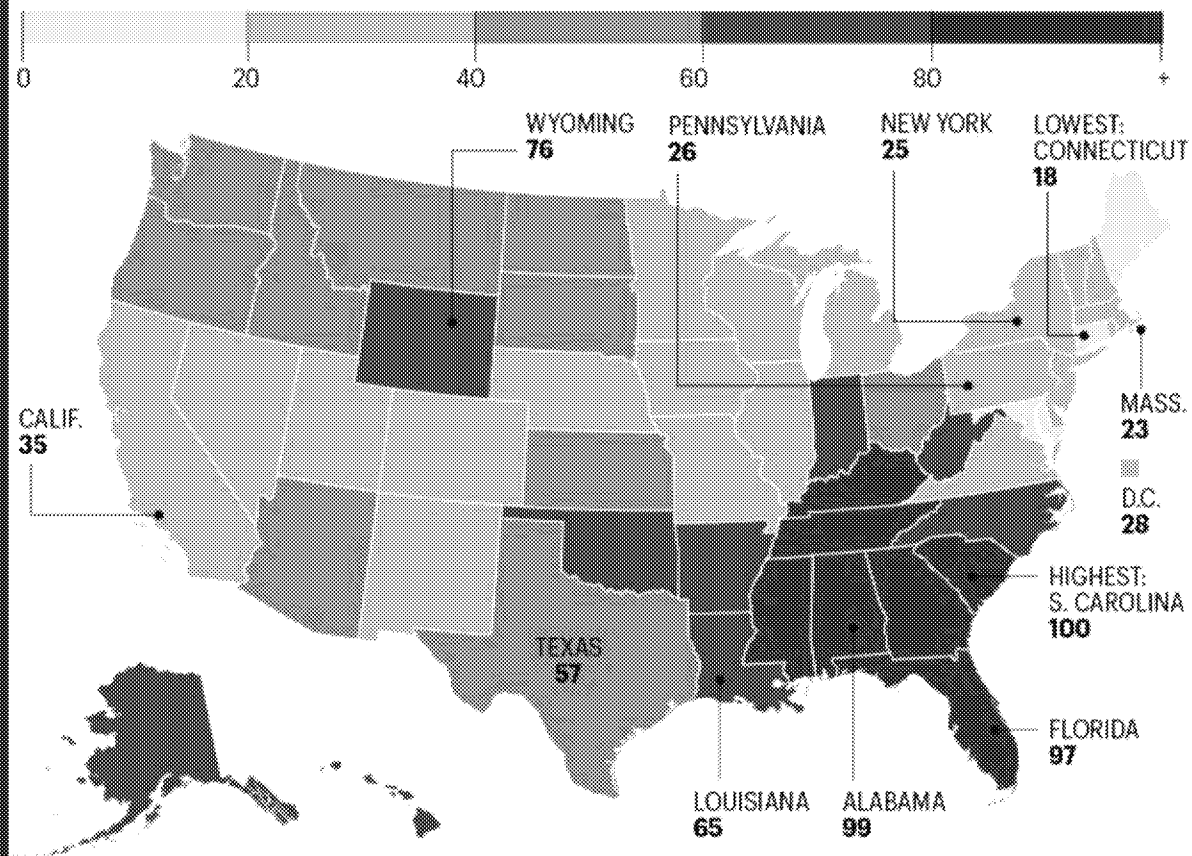


*Covid-19 case counts are based on the seven-day moving average of daily new coronavirus cases.

Source: New York Times and Census Bureau

COVID-19 STATE CASES TRACKER

NUMBER OF CASES PER 100,000 POPULATION



SOURCE: NEW YORK TIMES DATA, CALCULATED ON A 7-DAY MOVING AVERAGE

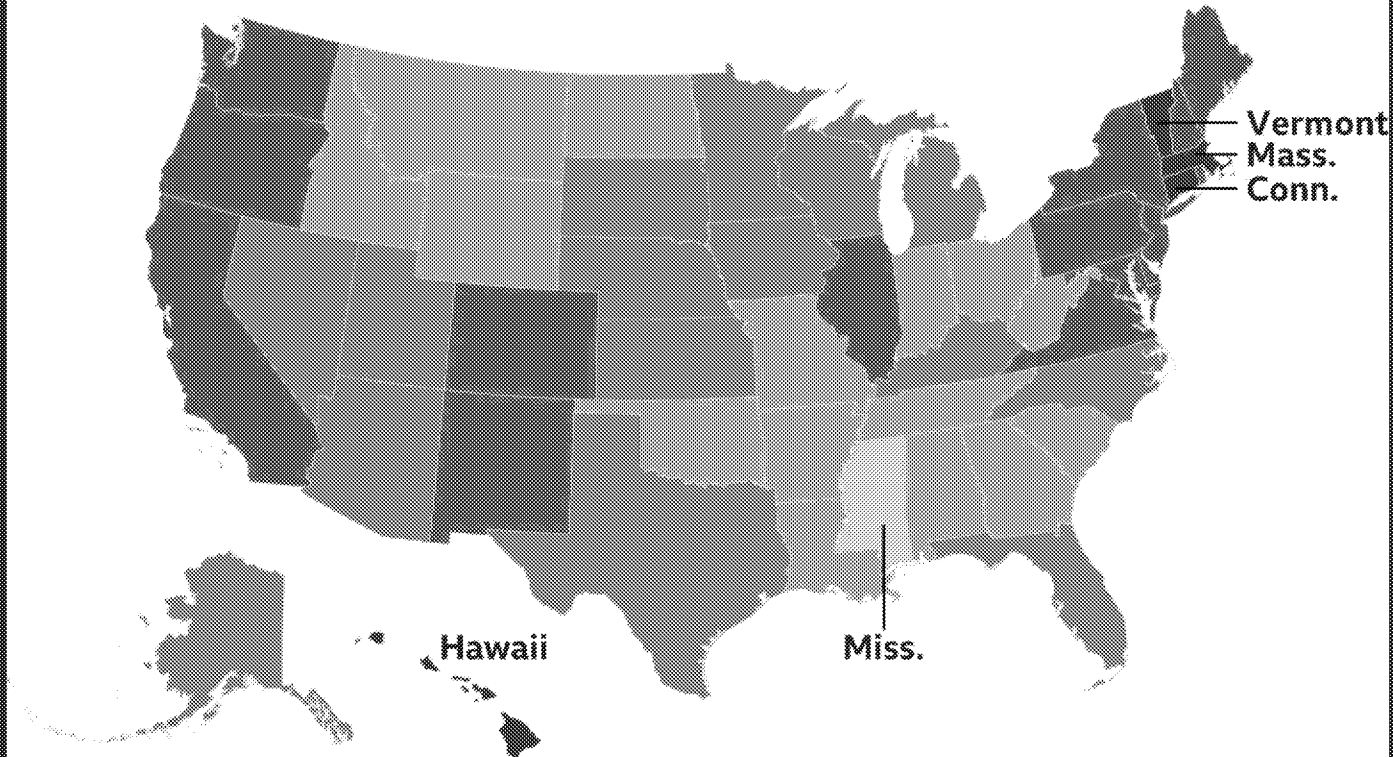
DATA THROUGH 8/31/2021

FORTUNE

Big regional differences in vaccination rate

Percentage of residents given at least one dose, by US state

31-40% 41-50% 51-60% 61-70% 70%+

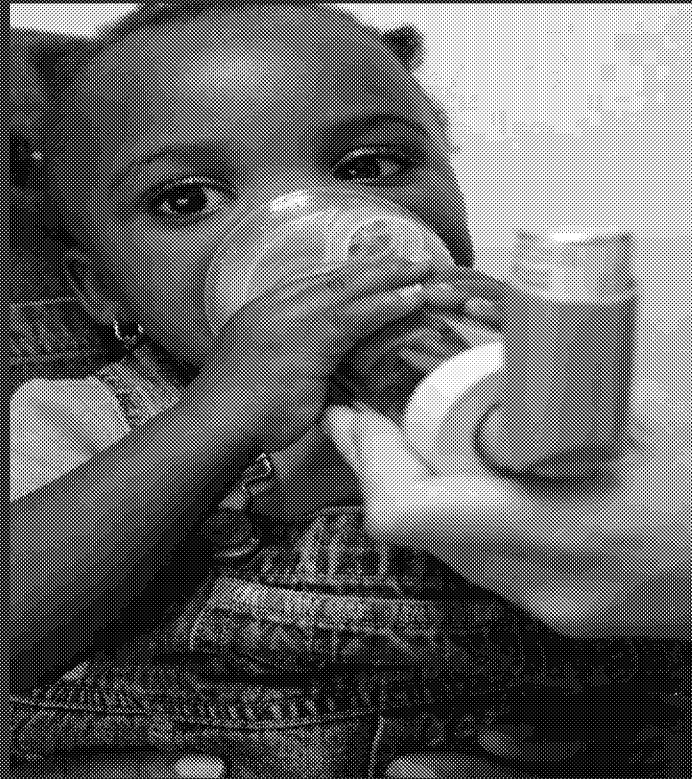


Source: US Centers for Disease Control and Prevention, data to 2 August



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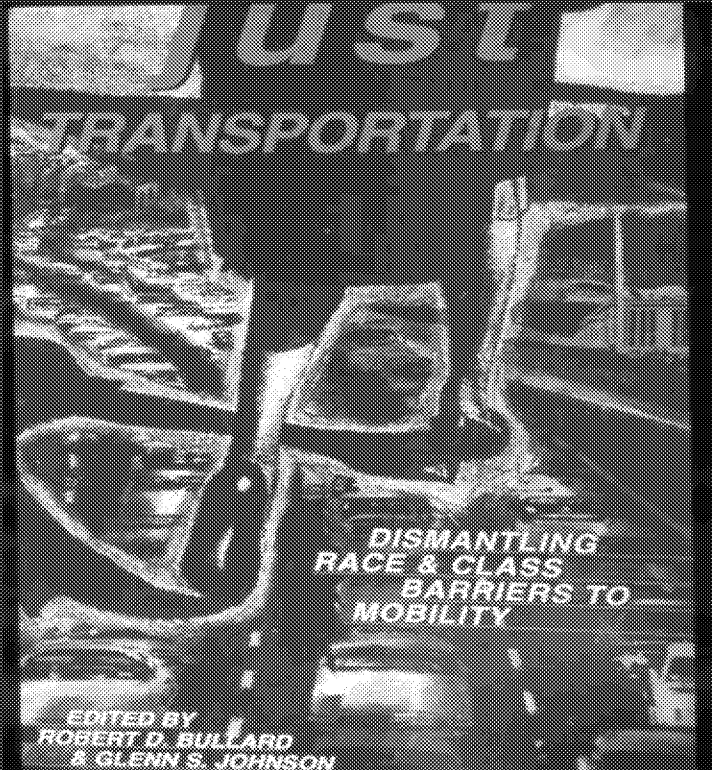
Asthma and People of Color



- African American adults are almost more likely than whites to die from asthma related causes.
- Black and Hispanic children are more likely to be admitted to the hospital for asthma, as compared to non-Hispanic white children.
- African American children have an asthma death rate that of non-Hispanic white children.

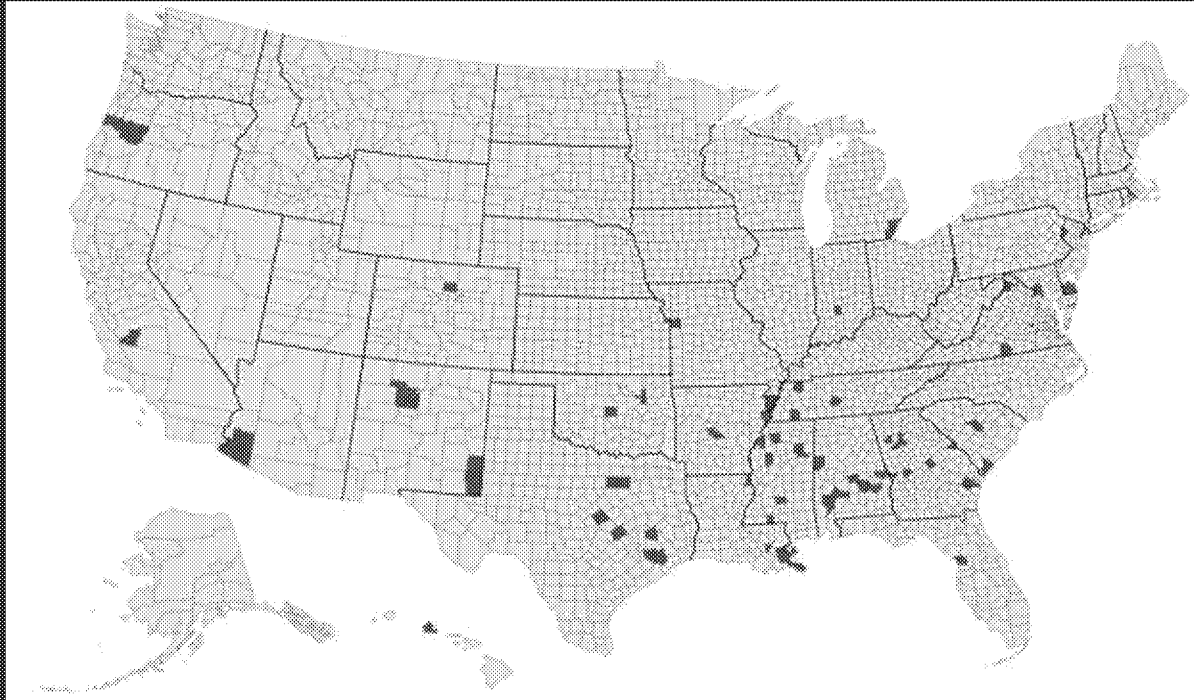
Source: CDC (2021)

A Call for Transportation Justice



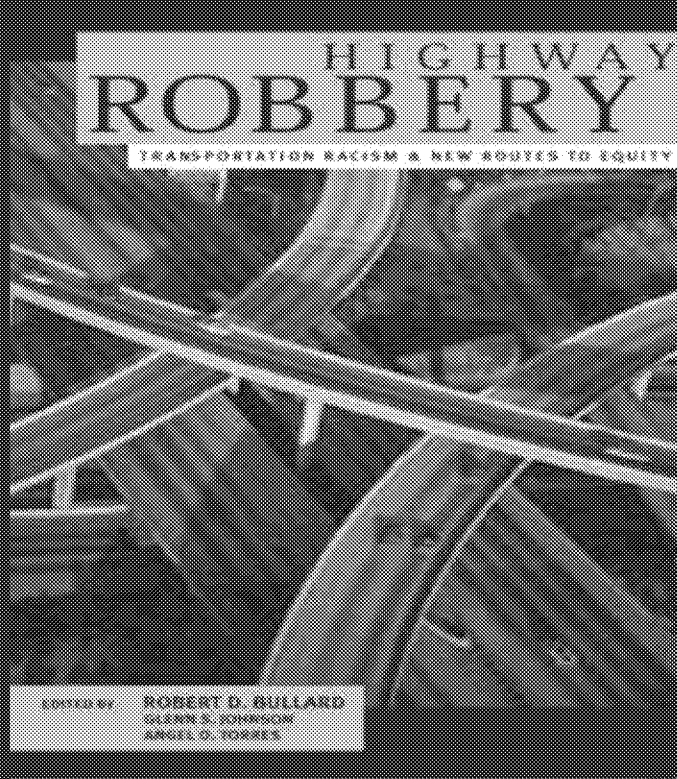
- My 1997 **Just Transportation** book framed transportation as a civil rights, environmental, economic, health and racial justice issue
- Transportation touches every aspect of our lives
- It affects residential and industrial growth, physical and social mobility, and even access to COVID-19 testing and vaccination sites

WHERE BLACK AMERICANS WILL TRAVEL FARTHER THAN WHITES FOR COVID-19 VACCINATION



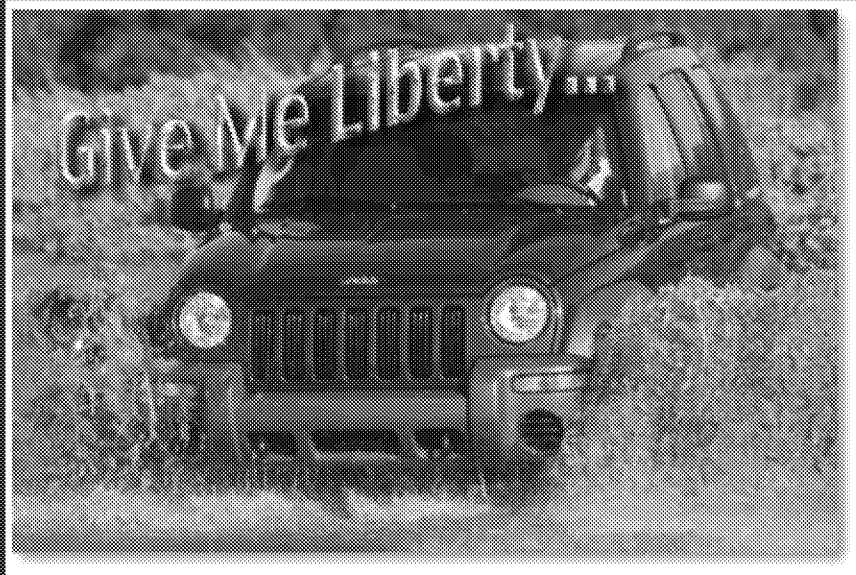
Source: Inmaculada Hernandez (2021)

The Battle of Roads vs Transit



- Racism has shaped much of the funding, planning, location, infrastructure, design, and policing of public transportation in America
- have been given priority over
- My 2004 book, , Foreword by Congressman John Lewis, illustrates the contributions of transportation policy, and transportation tax dollars, to racial and economic inequality
- Asian American and African American workers commute by public transit at nearly 4 times the rate of white workers

Car Ownership in America



- Car ownership is associated with freedom and flexibility
- Some _____ of U.S. households have access to a car
- People of color overall are least likely to have access to a car
- Only _____ of Whites live in homes with no car, compared to _____ of Black and _____ of Latinos

Driven to Spend More



- The average American spends $\frac{1}{3}$ of their income on housing and $\frac{1}{3}$ on transportation
- Americans on average spend $\frac{1}{3}$ of their income on housing and $\frac{1}{3}$ on transportation
- Low-income Black families spend nearly one-third of their income on transportation
- Americans spend more on transportation than on health care, education or food

Source: U.S. Bureau of Labor Statistics (2019)

No Car and No Supermarket Store Within a Mile



SOURCE: Department of Agriculture, Centers for Disease Control

**FUNDING CAN
SAVE LIVES**

Walking While Black: Traffic Accidents

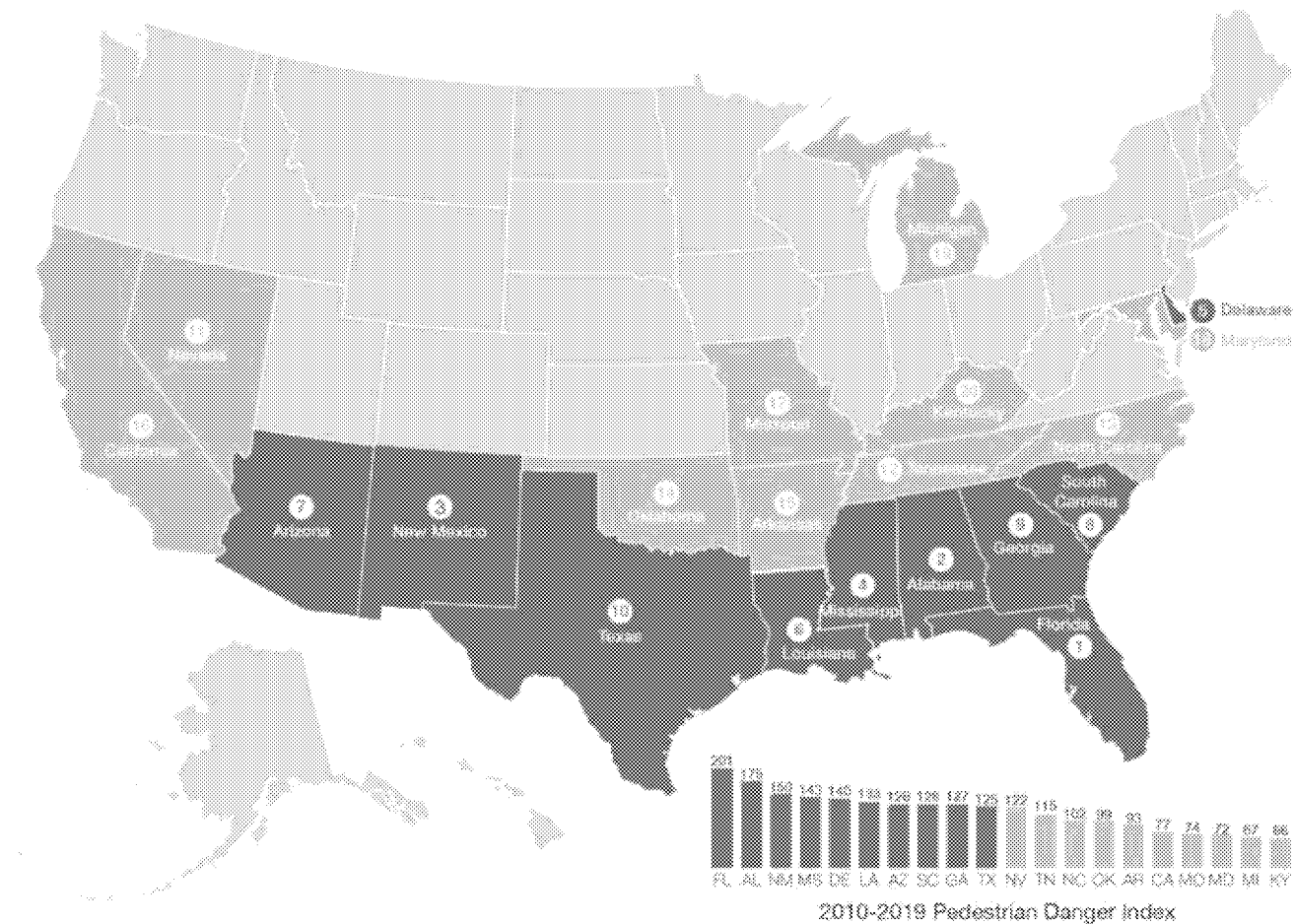


- Some 38,680 people died in motor vehicle traffic crashes in 2020
- Black people represented the largest increase in traffic deaths in 2020
- Black traffic deaths increased 23 percent from 2019, the largest increase in traffic deaths among racial groups
- Blacks are more likely to be walkers and 82 percent more likely to be hit by drivers (Smart Growth America 2021)
- No infrastructure funding means more preventable black deaths

Source: USDOT (2021)

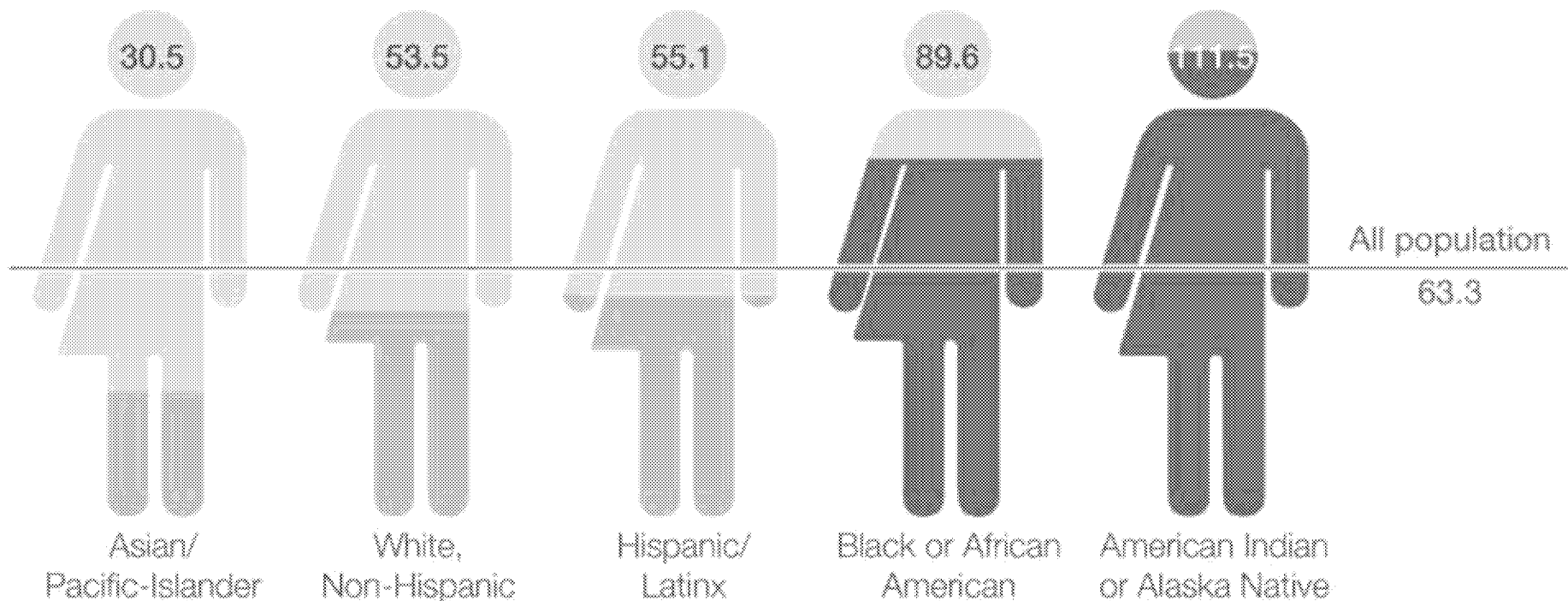
THE TOP 20

Most dangerous states for pedestrians (2010-2019)



The burden is not shared equally

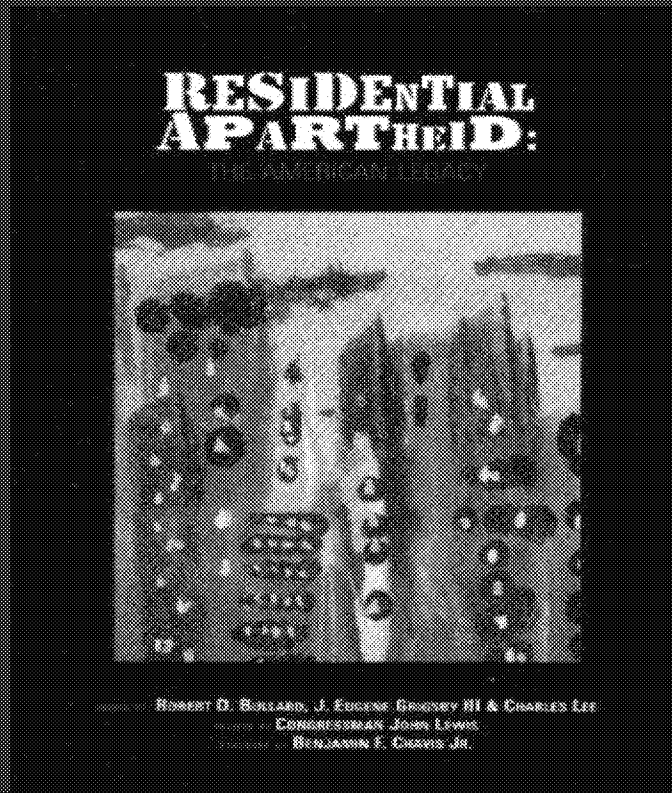
Relative pedestrian danger by race and ethnicity
(2010-2019)



Stranded by

and

Impact of Residential Apartheid



- Racist housing policies and practices created and perpetuated residential apartheid
- Poor housing and neighborhood factors can lead to avoidable health costs and bad health outcomes

Theft of Black Homeownership Wealth

BLACK
WEALTH
MATTERS

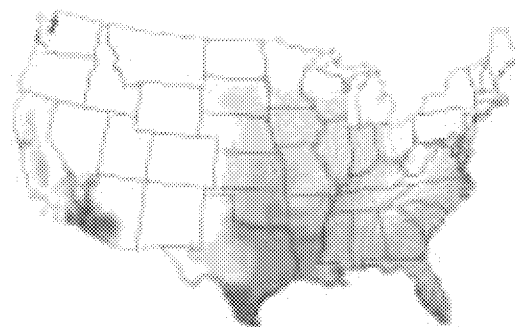
- Homeownership lies at the heart of the American Dream and wealth creation.
- Racism steals black homeownership wealth.
- A Brookings study estimates racial discrimination in black neighborhoods costs black homeowners an average of \$48,000 per home, amounting to \$156 billion in cumulative losses.

Source: Perry, Rothwell and Harshbarger (2018)

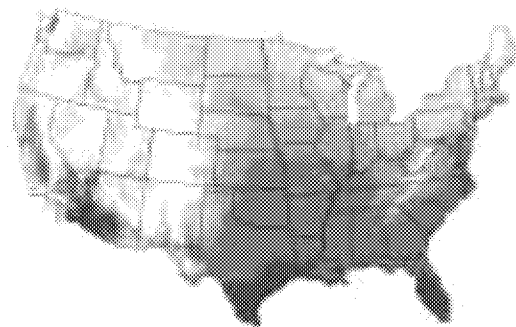
**CLIMATE CHANGE WILL
CAUSE DAYS**

Number of Days with a Heat Index Above 100°F

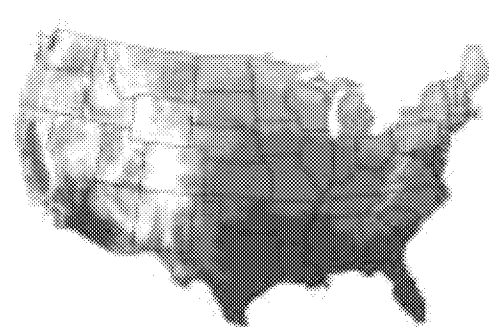
Historical



Midcentury No Action



Late Century No Action



Average Days per Year

0-1

>1-10

>10-25

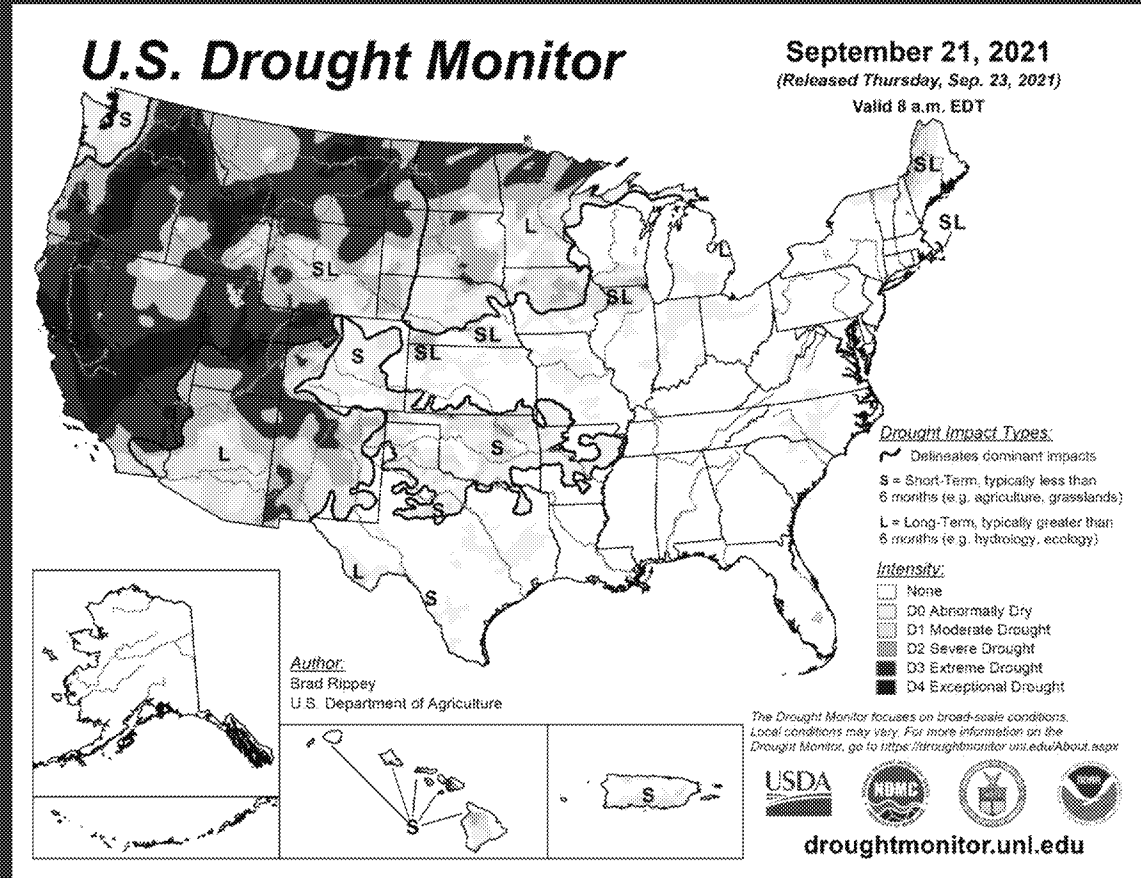
>25-50

>50-100

>100-200

**IS THE
NUMBER ONE
WEATHER-
RELATED KILLER**

Climate Climate Change is Worsening Drought



Too Hot to Work Outside

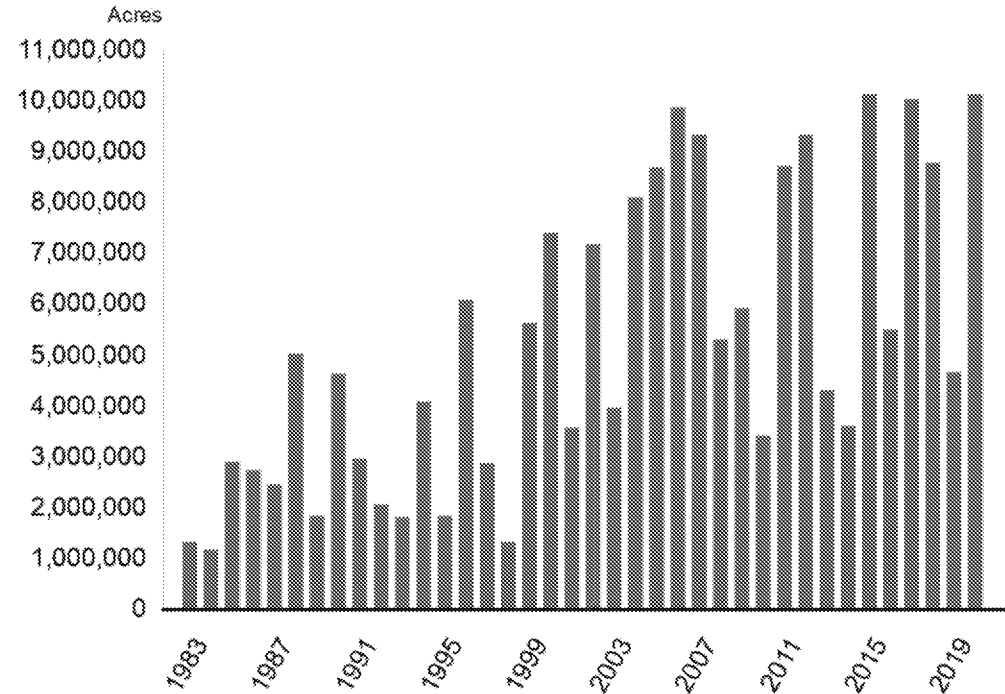


- Heat deaths have doubled since the early 1990s with workers of color hit hardest.
- More than 100 million Americans earn their living doing physical labor outdoors
- Outdoor workers are up to 10 times more likely to die from exposure to extreme heat than the general population

Source: Union of Concerned Scientists (2021); National Public Radio (2021)

Climate Change is Linked to More and Bigger Wildfires

US land burned by fires
(1983-2020)



Source: National Interagency Fire Center



More Americans across the nation are breathing more toxic wildfire smoke—and the harmful particles it carries—than they did 10 years ago.

Major cities with significant increases in smoke days

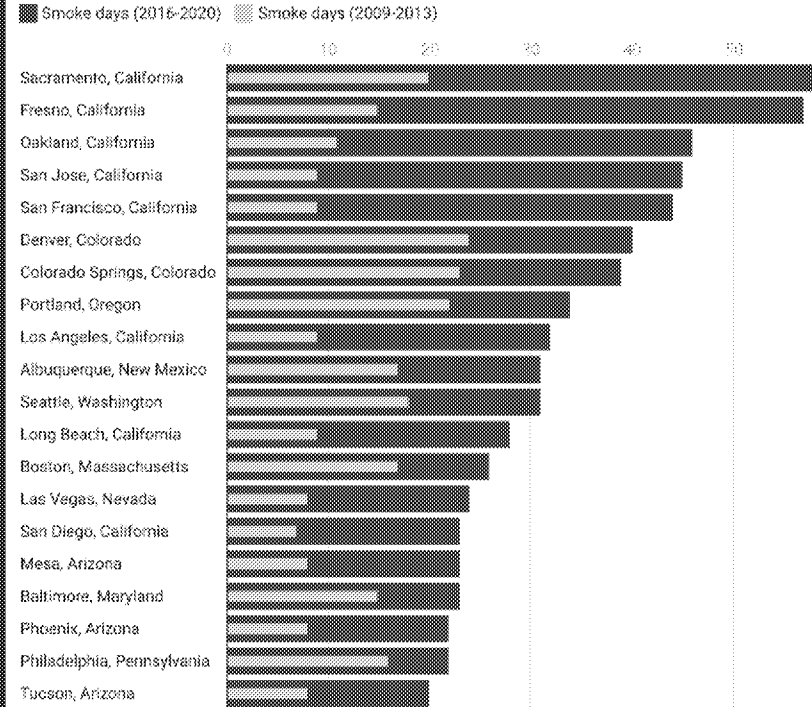


Chart: Allison Galdanha • Source: Analysis of National Oceanic and Atmospheric Administration satellite images by NPR's California Newsroom and Stanford University's Environmental Change and Human Outcomes Lab • Created with Goodnotes

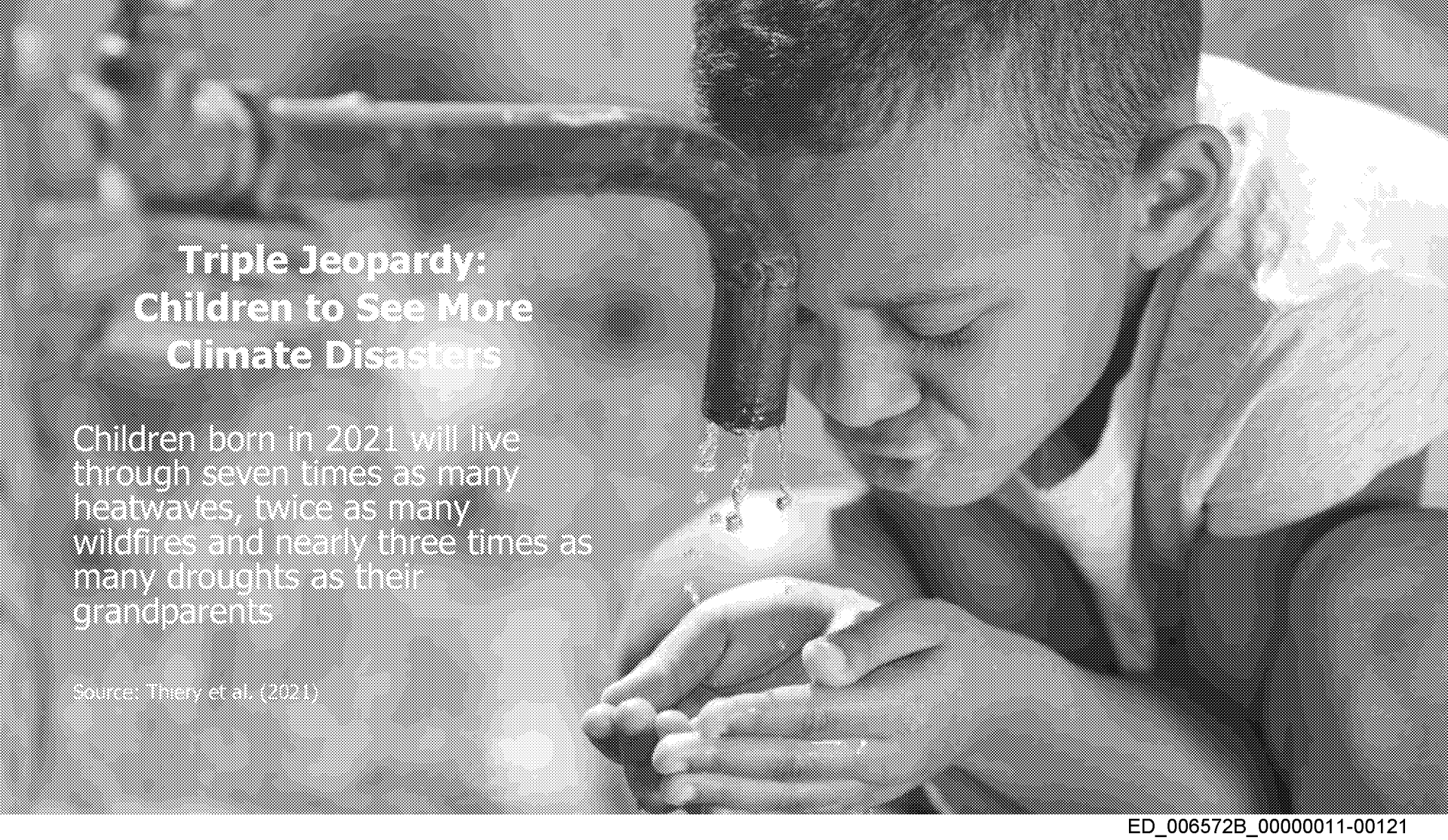
THE MOST VULNERABLE
PAY THE HIGHEST PRICE
FOR POLLUTION:
CHILDREN OF COLOR



Asthma Epidemic and People of Color

- African American adults are almost more likely than whites to die from asthma related causes.
- Black and Hispanic children are more likely to be admitted to the hospital for asthma, as compared to non-Hispanic white children.
- African American children have an asthma death rate that of non-Hispanic white children.

Source: CDC (2021)

A black and white photograph of a young boy with short hair, wearing a light-colored t-shirt. He is looking down intently at his hands, which are cupped under a faucet. Water is dripping from the faucet into his hands. The background is slightly out of focus, showing what appears to be a kitchen sink area.

Triple Jeopardy: Children to See More Climate Disasters

Children born in 2021 will live through seven times as many heatwaves, twice as many wildfires and nearly three times as many droughts as their grandparents

Source: Thiery et al. (2021)

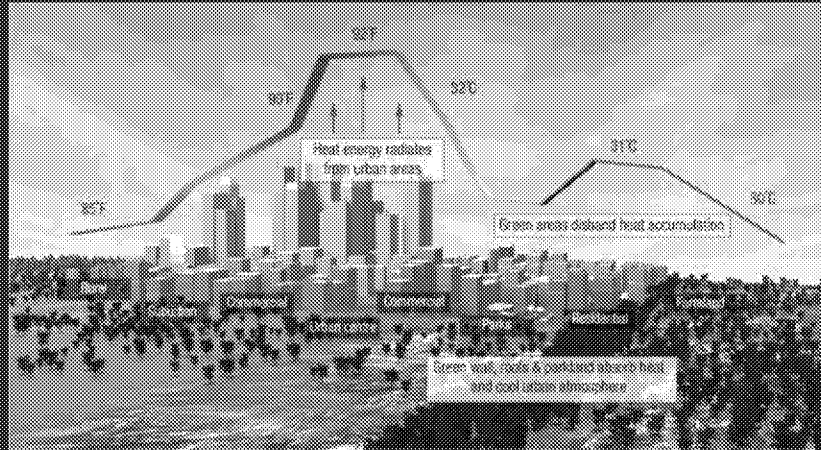


TOO TO LEARN IN SCHOOLS

- Climate change will result in hotter school days and hotter classrooms—making it hard to learn and concentrate
- By 2025, more than 13,700 K-12 U.S. schools will need to install air conditioning, and another 13,500 will need to upgrade their existing systems

Source: Chinowsky (2021)

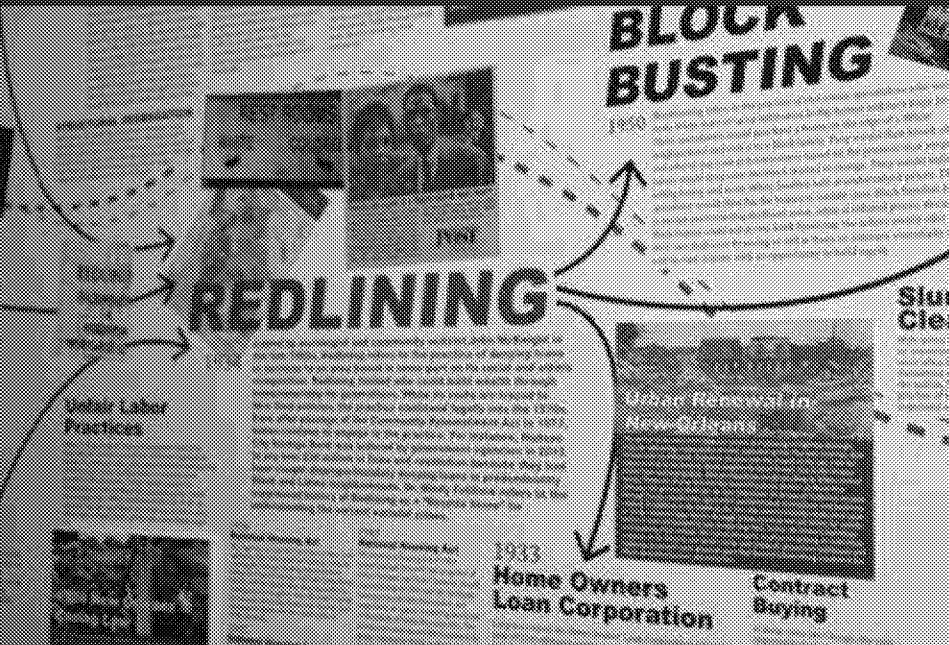
Heat Islands and Racial Justice



- Blacks are 52% more likely than whites to live in urban heat islands, while Asians are 32% more likely and Latinos are 21% more likely.
- Heat island risk is greatest in cities.
- Blacks have a 5.3 percent higher prevalence of heat-related mortality than whites, and 64 percent of this disparity is traced to disparities in home air conditioning

Source: Jesdale et al. (2013)

Footprint of Racist Housing Policy



- Racial practices against Black people and others a century ago is showing up in disparities today.
- neighborhoods are 5-13 degrees Fahrenheit warmer than non-redlined neighborhood.
- is also implicated in high dangers in segregated Black and Brown communities.

Source: Hoffman et al. (2020); and Nemeth and Rowan (2020).

Heat, Pollution, and Pregnancy Risks



Image: © LWA/Dann Tardiff/Getty

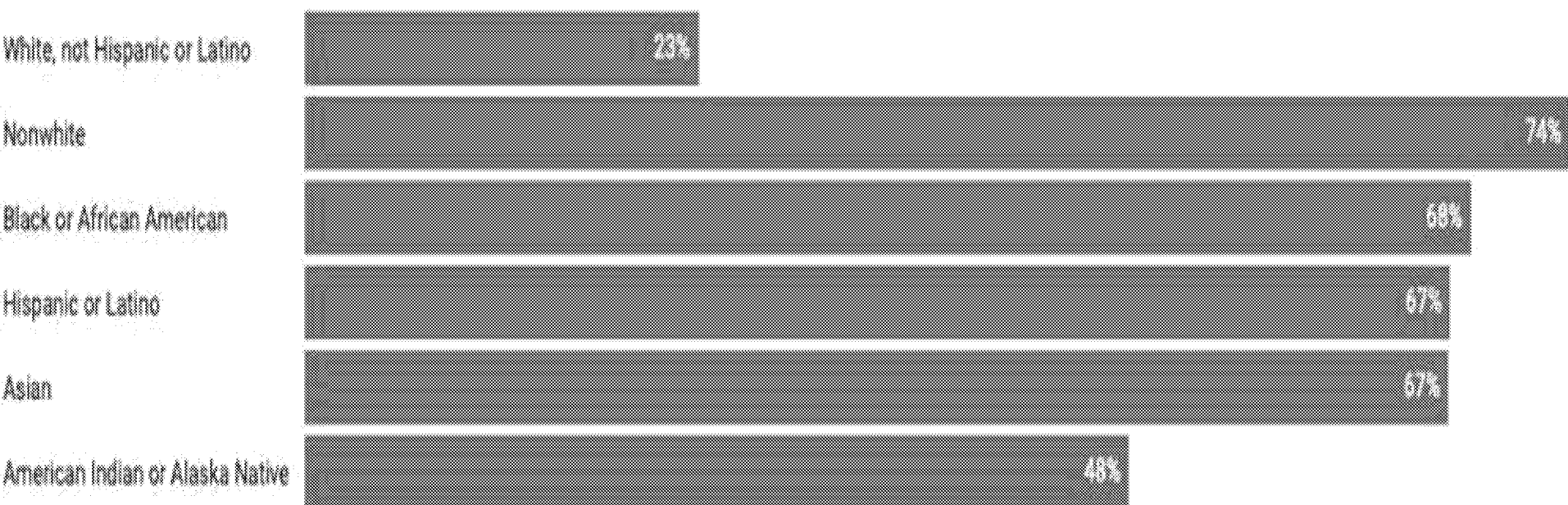
- Women exposed to high temperatures or air pollution are more likely to have premature, underweight, or stillborn babies
- Black mothers and their babies are harmed at a much higher rate than for white mothers and their babies
- Physicians can serve as advocates for their patients by educating officials on the role plays and insist on just climate action

Source: Bekkar et al. (2020)

**SYSTEMIC RACISM
DEPRIVES PEOPLE OF
COLOR BENEFITS OF
NATURE:**

People of color are more likely than white people to live in an area that is nature deprived

Percent of people living in a nature-deprived area by census tract demographics in the United States, 2017



Note: Communities are considered nature deprived if their census tract has a higher proportion of natural area lost to human activities than the state-level median.

Chart: Center for American Progress

Source: Vincent A. Landau, Meredith L. McClure, and Brett G. Dickson, "Analysis of the Disparities in Nature Loss and Access to Nature: Technical Report." (Truckee, CA: Conservation Science Partners, available at https://www.csp-inc.org/public/CSP-CAP_Disparities_in_Nature_Loss_FINAL_Report_060120.pdf).

**Rich Americans enjoy
almost more
greenery in their
environment compared with
lower-income communities.**

Source: American Forests (2021)

Why Tree Equity Matters



- This inequitable distribution of trees has deprived many communities of color of the health and other benefits that sufficient tree cover can deliver.
- Neighborhoods with a majority of people of color have 33% less tree canopy on average than majority white communities.
- Neighborhoods with 90% or more of their residents living in poverty have 41% less tree canopy than communities with only 10% or less of the population in poverty.

Source: American Forests (2021)

Loss of Natural Land Cover and Equity



- A new study from researchers from the University of Vermont and the Gund Institute for Environment found people of color and low-income people will face the harshest effects from loss of natural land cover by 2100.
- People of color in the U.S. will experience an estimated decrease in air quality, an decrease in crop pollination and an decrease in control of vector-borne disease.

Source: Gourevitch et al. (2021)

Positive Health Effects of Nature



- A walk in the park soothes the mind, body and soul
- A two-minute walk may counter the negative health effects of sitting
- Walking in nature also lowers stress levels and improves mood

Source: Bratman et al. (2015)

Trees are Good for Children



- Studies show nature has restorative power whose benefits can extend to very young children who walk in the park and among urban trees
- Trees can restore attention in young, healthy, developing brains

Source: Schutte and Torquati (2015)

**ALL PARKS,
GREENSPACE AND
PLAYGROUNDS
ARE
CREATED EQUAL**



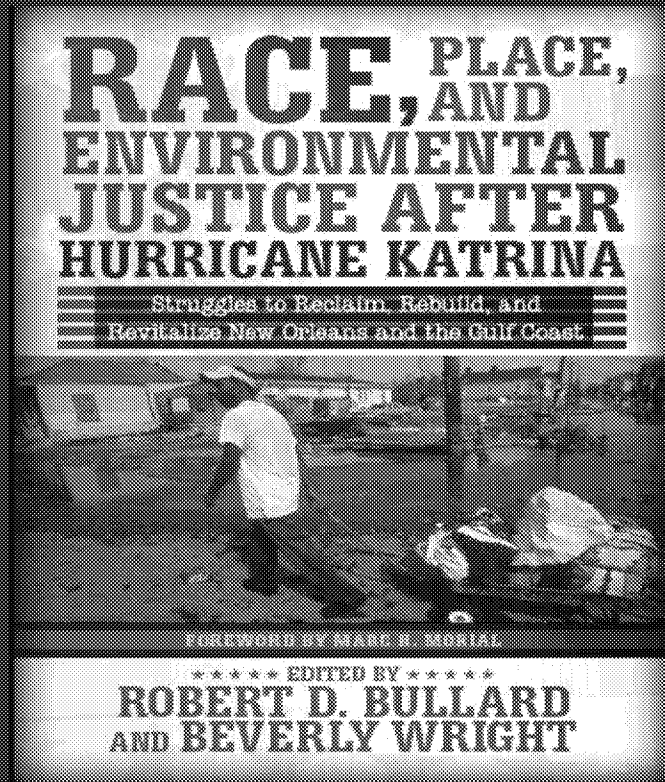






**WHO GETS
TO
REBUILD AFTER
DISASTERS AND
WHO GETS LEFT
BEHIND?**

Protecting the Most Vulnerable



- In major disasters, the most vulnerable populations generally suffer the earliest and most damaging setbacks because of where they live, their limited income and economic means, and their lack of access to health care
- Social vulnerability involves the basic provision of health care, the livability of places, overall indicators of quality of life, and accessibility of lifelines (goods, services, emergency response personnel), capital, and political representation





IN THE WAKE OF THE STORM

ENVIRONMENT, DISASTER, AND RACE AFTER KATRINA

A REPORT FROM THE RUSSELL SAGE FOUNDATION



RUSSELL SAGE FOUNDATION
112 East 64th Street
New York, New York 10021
www.russellsage.org

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ALICE FOTHERGILL, RACHEL MORELLO-FROSCH, BEVERLY WRIGHT

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Unnatural Disasters and Vulnerability



- Much of the death and destruction attributed to “natural” disasters is unnatural and man-made
- Heightened vulnerability is not so much determined by the disasters but by the social, economic, and political conditions society creates for different populations
- Social vulnerability involves the basic provision of health care, the livability of places, overall indicators of quality of life, and accessibility of lifelines (goods, services, emergency response personnel), capital, and political representation

Competition for Scarce Resources



- Hurricanes and other weather-related disasters increase competition for housing, health care, and other scarce resources in unaffected areas
- Disasters marginalize already marginalized communities and expose the survivors to price gouging, home repair scams, banking and insurance redlining, and predatory lending practices
- Disasters hit small and minority-owned businesses hardest because they are often undercapitalized, vulnerable, and sensitive to even small market shifts

Who Gets Help: Unequal Protection



- Measures to prevent or contain the effects of natural and man-made disaster vulnerability are not equally provided to all
- Typically, flood-control investments provide location-specific benefits, restricted to populations who live or own assets in protected areas
- Thus, by virtue of where people live, work, or own property, may exclude them from the benefits of flood-control investments

FEMA Aid Not Reaching Greatest Need



National Advisory Council
Report to the FEMA Administrator
November 2020

- The poorest renters were 23% less likely than higher-income renters to get housing help
- The poorest homeowners received about half as much to rebuild their homes compared with higher-income homeowners
- FEMA was about twice as likely to deny housing assistance to lower-income disaster survivors because the agency judged the damage to their home to be "insufficient"
- Disaster survivors are fighting displacement
- FEMA has not analyzed whether there are racial disparities in who receives money after disasters

Source: FEMA National Advisory Council (2020)

Climate Change Affects the Frequency and Strength of Floods



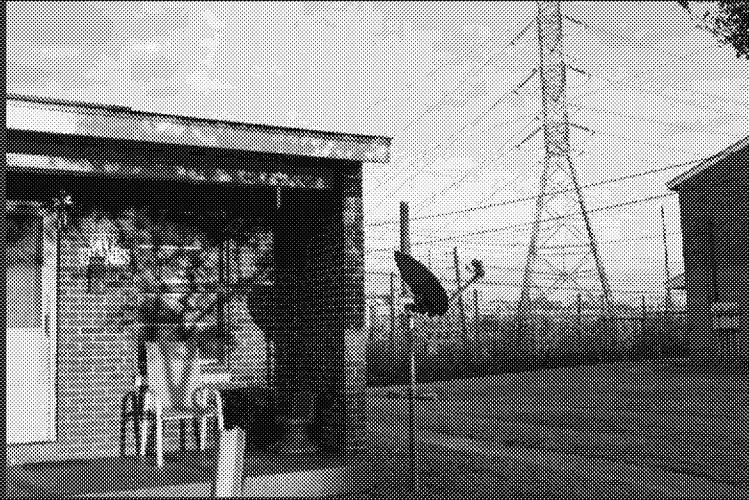
Redlining Worsens Flooding



- People of color redlined neighborhoods now face greater flooding risks
- Homes worth a combined \$107 billion are now 25 percent more likely to be flooded than non-redlined homes
- More than 58 percent "of households in neighborhoods that were once designated undesirable for mortgage lending are non-white" and "history has shown that when storms hit, communities of color in these formerly redlined areas often suffer the most."

Source: Redfin Real Estate News (2021)

Superfund Sites Near HUD Assisted Housing



- 70 percent of the country's Superfund sites are located within a mile of government-assisted housing
- An estimated 77,000 people who live in federally assisted housing in the U.S. are at risk of being poisoned by toxic contamination housing.
- Tenants living near these sites are predominantly people of color, children, elderly and disabled people.

Source: Coffey et al. (2021)

Left Behind in Flood Plains



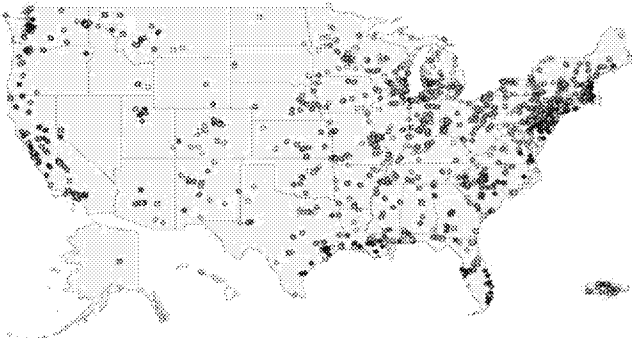
- Nationwide, government-subsidized households, about 8 to 9 percent, are in flood plains
- HUD does not have a universal policy against paying for housing in a designated flood zone.
- Residents of Houston's Arbor Court Apartments—who were hit by Hurricane Harvey and two previous floods—are trapped in a flood zone because their housing vouchers can be used only at their existing apartment, which is near a bayou.

Source: New York times (2019)

Climate Change Threatens Superfund Sites

Superfund Sites at Risk from Climate Change

The U.S. Government Accountability Office found that 60 percent of non-federal Superfund sites contaminated with hazardous substances were at risk from climate change effects such as coastal and river flooding and wildfires.



- Coastal hazard*
- Flood hazard
- Wildfire hazard
- Coastal and wildfire hazards
- Flood and wildfire hazards
- No identified impacts

*Flood, sea level rise, storm surge

- Climate change threatens of toxic superfund sites in the country
- Hundreds of polluted sites face an increased risk of flooding from sea level rise, flooding exacerbated by global warming, or wildfires
- Superfund sites are disproportionately located near poor and people of color

Source: GAO (2019)

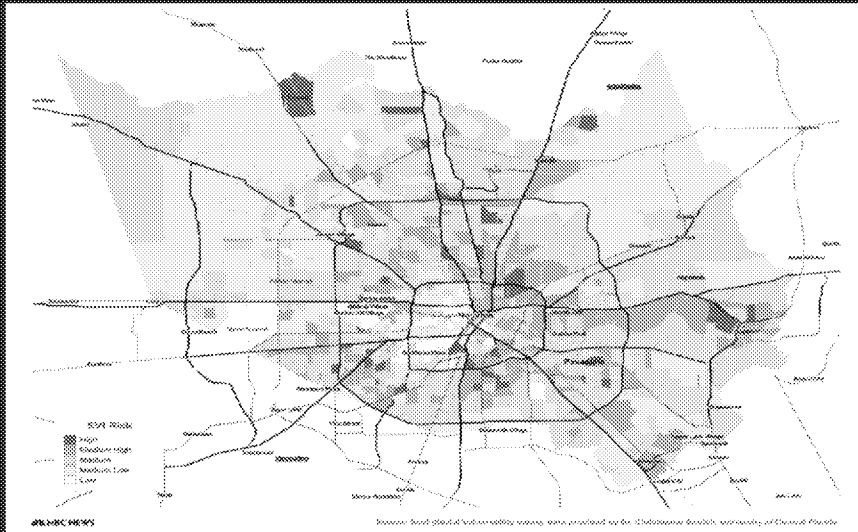
Superfund Sites Shorten Lifespan



- Living near one of the nation's 1,300 Superfund sites could lead to of lowered life expectancy
- Superfund sites in disadvantaged communities could cause about of lowered life expectancy

Source Kiaghadi et al. (2021)

Harvey Flooding and Vulnerability



- Hurricane Harvey storm-induced “flooding was significantly greater in Houston neighborhoods with a higher proportion of non-Hispanic Black and socioeconomically deprived residents.” Chakraborty et al. (2019)
- However, Harvey aid disproportionately went to white and more affluent households. Billings et al. (2021)
- Homeowners in majority people of color neighborhoods are less likely to qualify for federal grants to rebuild their homes.

- 1. Money Follows Money**
- 2. Money Follows Power**
- 3. Money Follows Whites**

Disasters Widen Racial Wealth Gap



Image: © 2017 Brett Crooner/Houston Chronicle

- Climate change will widen the racial wealth gap.
- Researchers from Rice University and the University of Pittsburgh found, in counties badly hit by natural disasters (areas with at least \$10 billion in damages) white communities gained an average $\$10,000$ in wealth following the damage and recovery efforts.
- Communities of color lose up to $\$10,000$ on average in personal wealth following events like hurricanes and wildfires.

Source: Howell and Elliott (2018)

Disaster Buyouts Benefit White Communities



- FEMA's cost-benefit calculations for disaster buyouts inherently benefit white Americans and those with more wealth.
- Generally, federal disaster buyout funds don't follow need.
- The most FEMA buyouts were in neighborhoods _____ or more white and non-Hispanic, even though white and non-Hispanic people make up about _____ of the US population.

Source: National Public Radio (2019)

Managed Retreat Leaves the Most Vulnerable People Behind

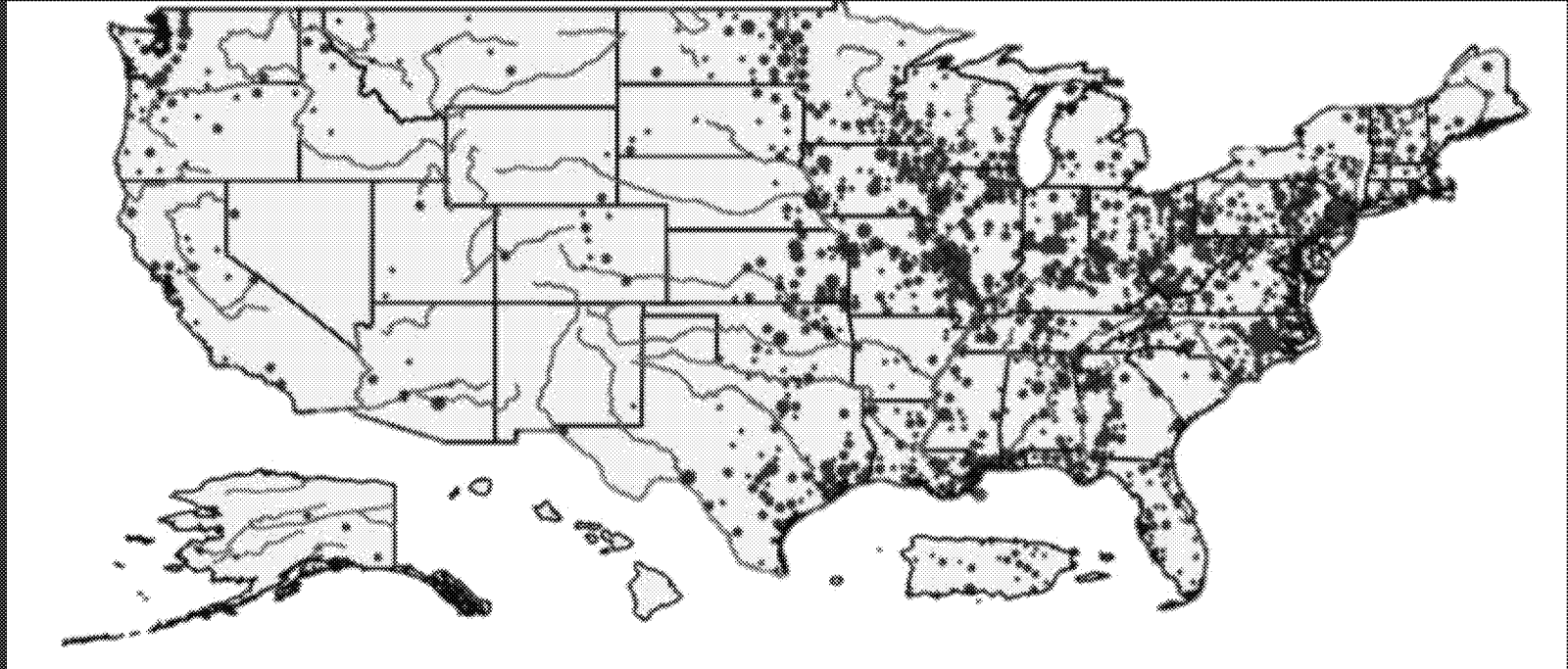


Image: © 2017 Joe Raedle/Getty

- A 2019 study analyzing more than 40,000 voluntary buyouts of flood-prone properties in the United States, in which homeowners sell properties to the government and the land is restored to open space, found FEMA's program to help Americans adapt to climate change isn't helping everyone
- The nation's most vulnerable population is being left behind
- Local governments in counties with higher population and income are more likely to administer buyouts

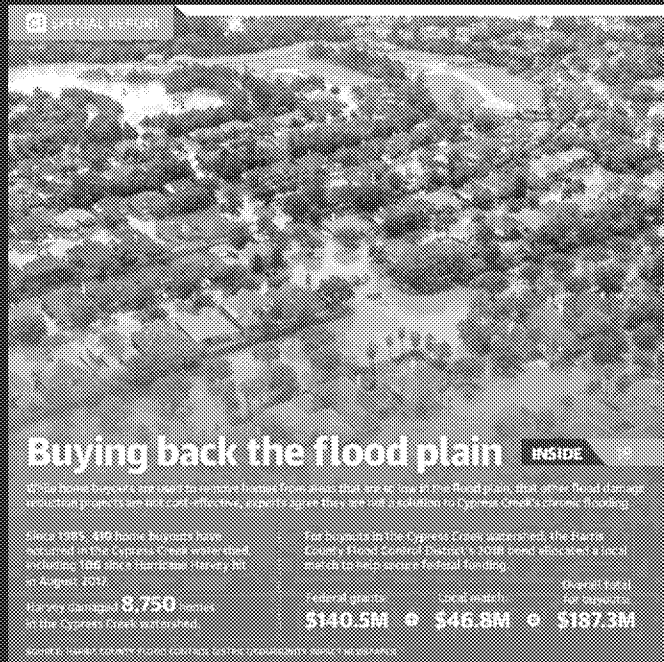
Source : Mach et al. (2019)

Number of Properties Bought Out by FEMA Through Their Flood Risk Mitigation Program - 1989–2017



Source: Science Advances (2019)

Race and Flood Relocation in Houston



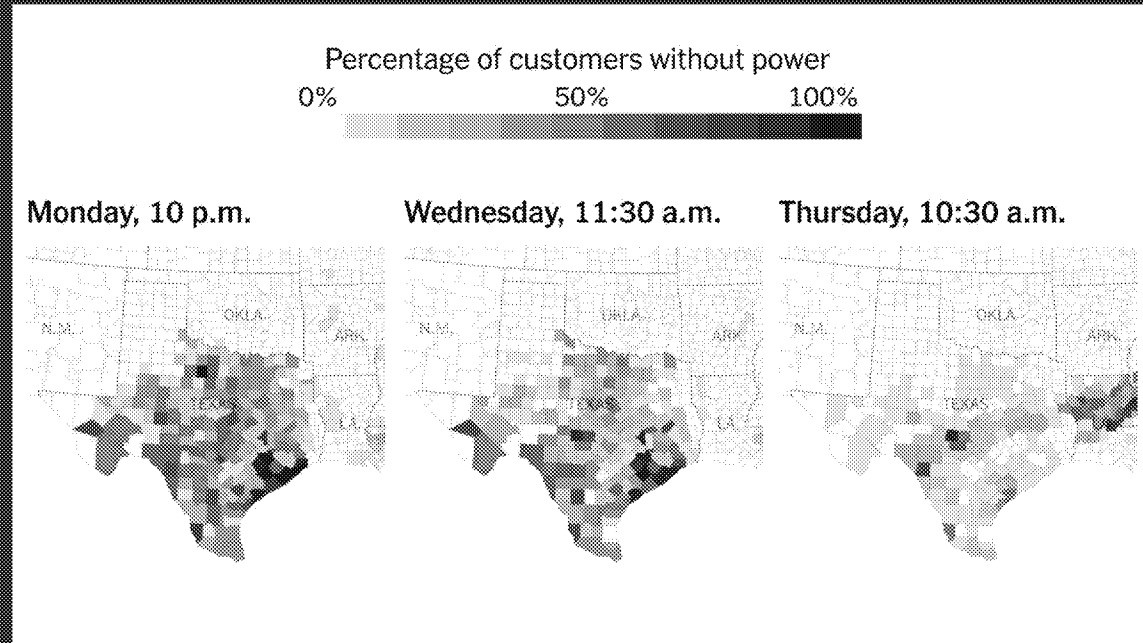
The Champions area in Spring and Klein was one of several areas in the Cypress Creek watershed that flooded during Hurricane Harvey in August 2017. (Courtesy Harris County Flood Control District)

- Government programs that relocate homeowners from flood-prone areas disproportionately disrupts the lives of residents from less white and affluent Houston neighborhoods
- Residents relocated from neighborhoods where buyout prices average \$80,000 end up three times farther from their original homes than residents relocated from neighborhoods where buyout prices averaged \$280,000

Source: Elliott et al. (2021)

**NO POWER, NO HEAT, NO
WATER**

Climate change will cause more grid failures—stranding more people without power, heat, and clean drinking water



Source: New York Times (2021)

Electrical Grid Failure and Heat Risks

- Extreme heat resulted in 12,000 deaths in the U.S. each year between 2010 and 2020 and is predicted to reach an annual toll as high as 97,000 by 2100 (Stone et al. 2021)
- The number of annual major “blackout” events doubled across five large U.S. cities between 2015 and 2020.
- When major blackouts and heatwaves occur together, at least 68% of people living in cities are exposed to indoor temperatures that can cause harmful heat exhaustion or heat stroke (Shindell et al. 2020)
- Heat stress causes more weather-related deaths in the United States, more than hurricanes, tornadoes or floods.

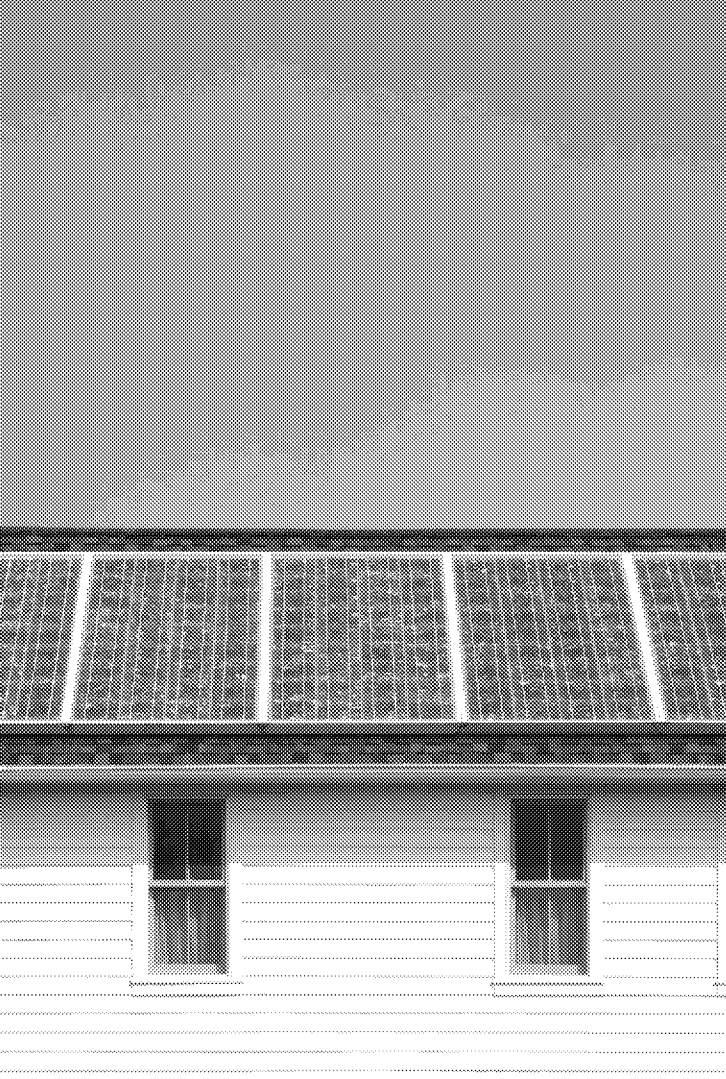
HITS

POOR AND PEOPLE OF COLOR HARDEST

US Governors' Positions on Climate and Clean Energy



Source: Center for American Progress (2020)



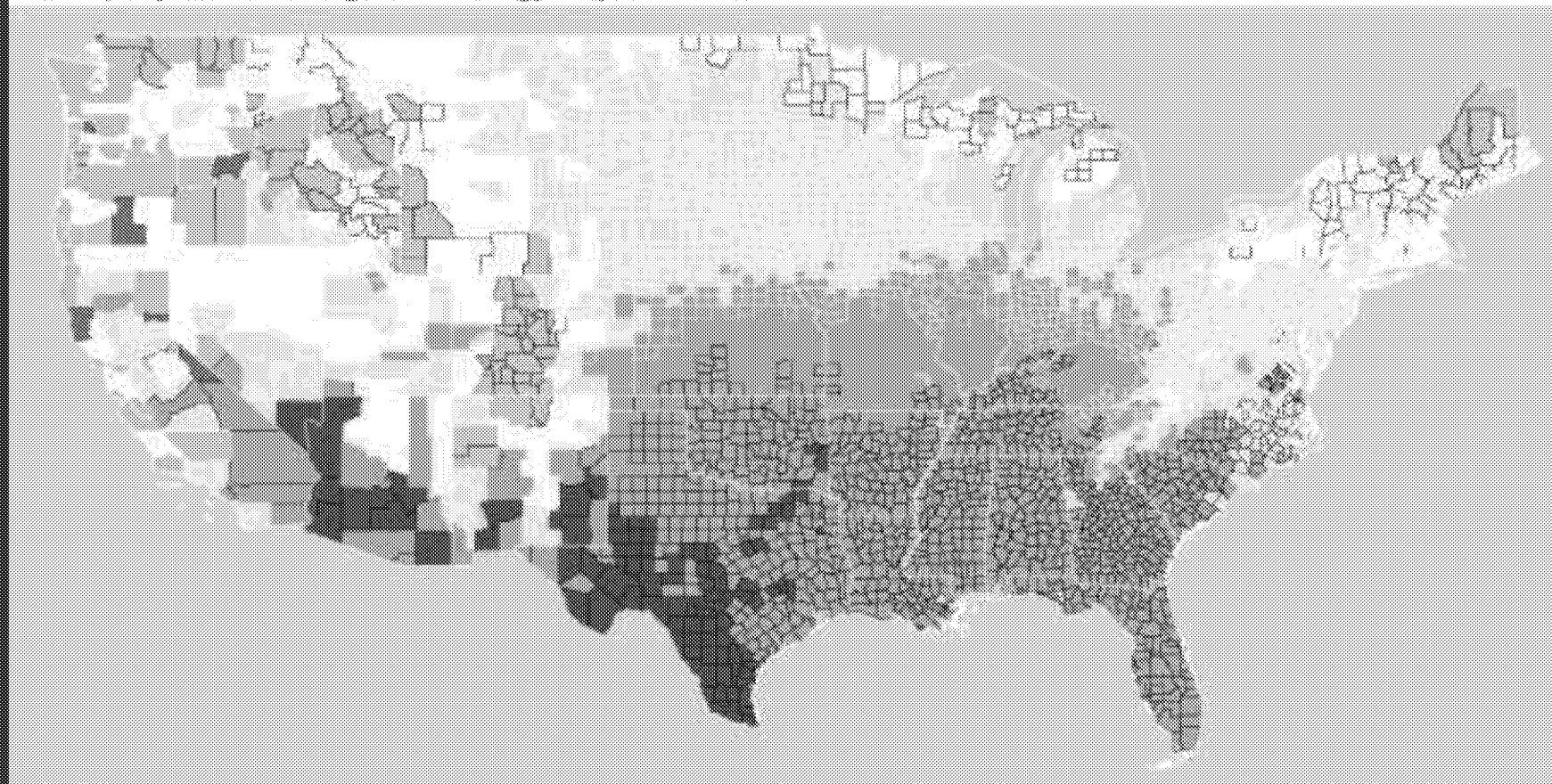
Paying More for Energy: ENERGY JUSTICE

- Black and Latino neighborhoods pay more for energy despite far lower emissions.
- Latino neighborhood per capita emissions equates to _____ of white neighborhoods, while Black neighborhoods emissions represent just _____ of those in white neighborhoods.
- Per capita emissions are higher in White neighborhoods than in African-American neighborhoods, even though the former live in more energy-efficient homes (low energy use intensity).

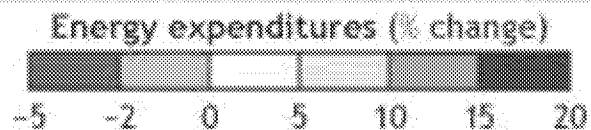
Source: Goldstein et al. (2021)

**31 PERCENT OF US
HOUSEHOLDS HAVE
TROUBLE PAYING THEIR
ENERGY BILLS**

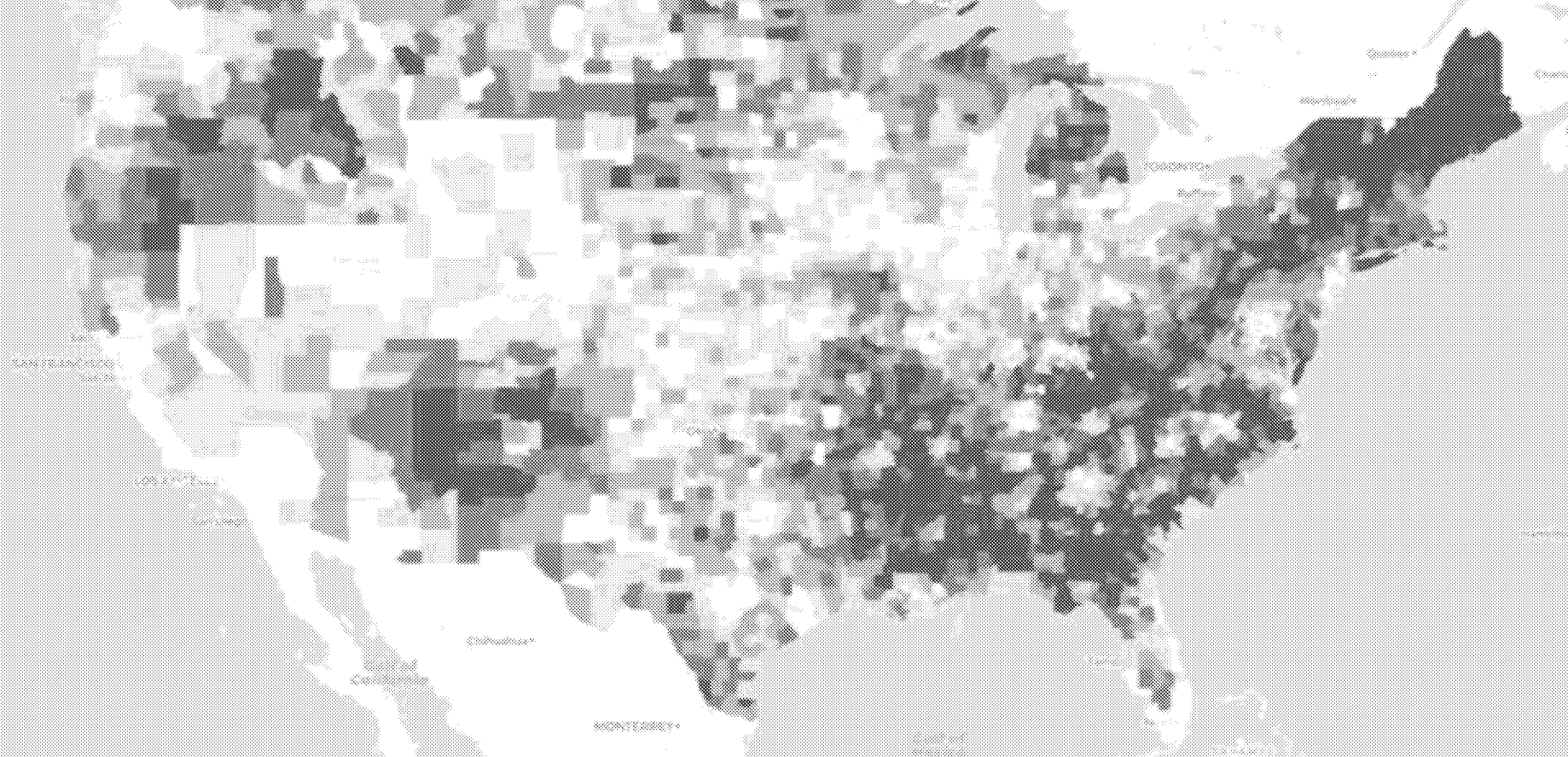
NCA4 projected changes in energy expenditures



2080-2099
(high emissions
compared to
no further change)



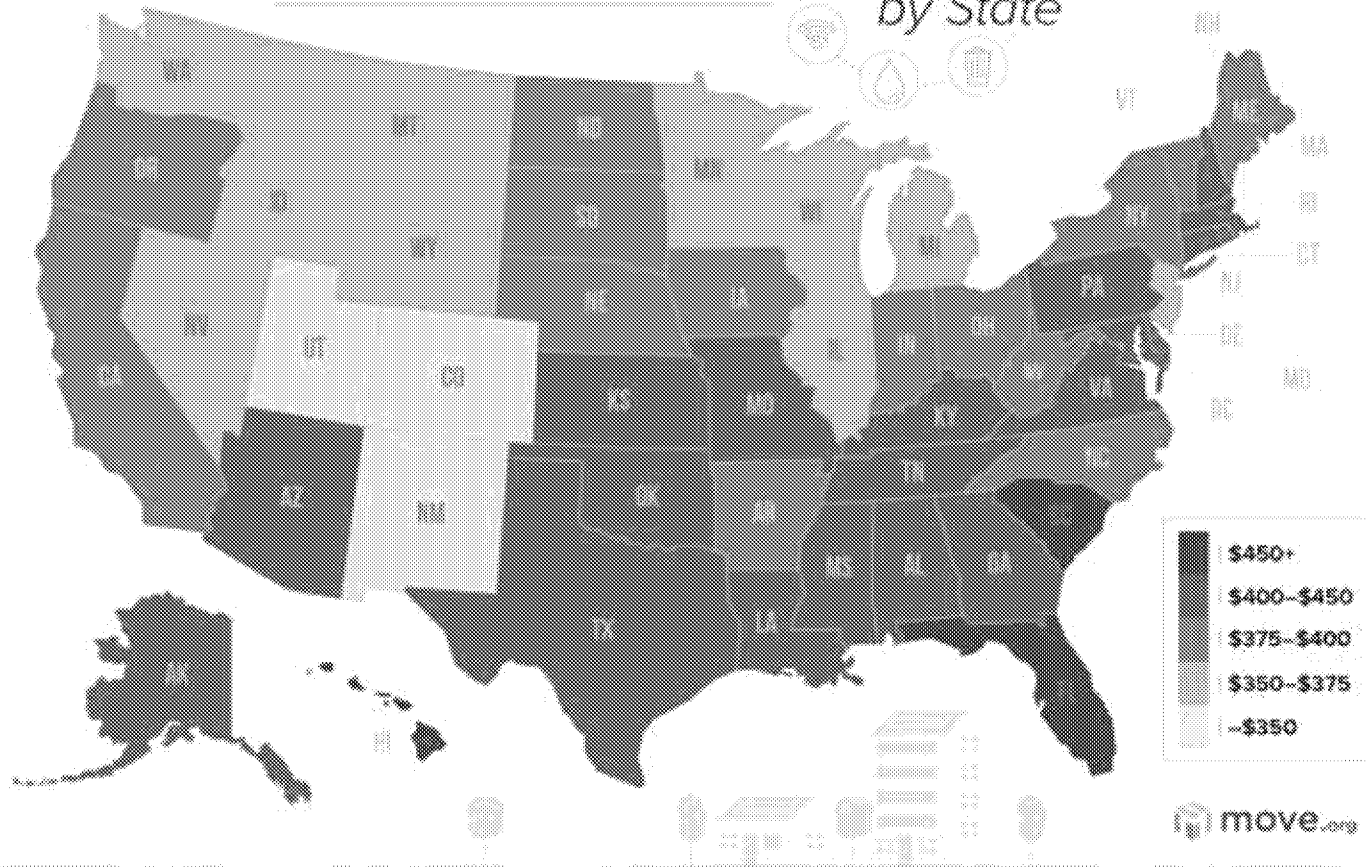
NOAA Climate.gov
Adapted from Figure 4.2
*Fourth National Climate
Assessment*



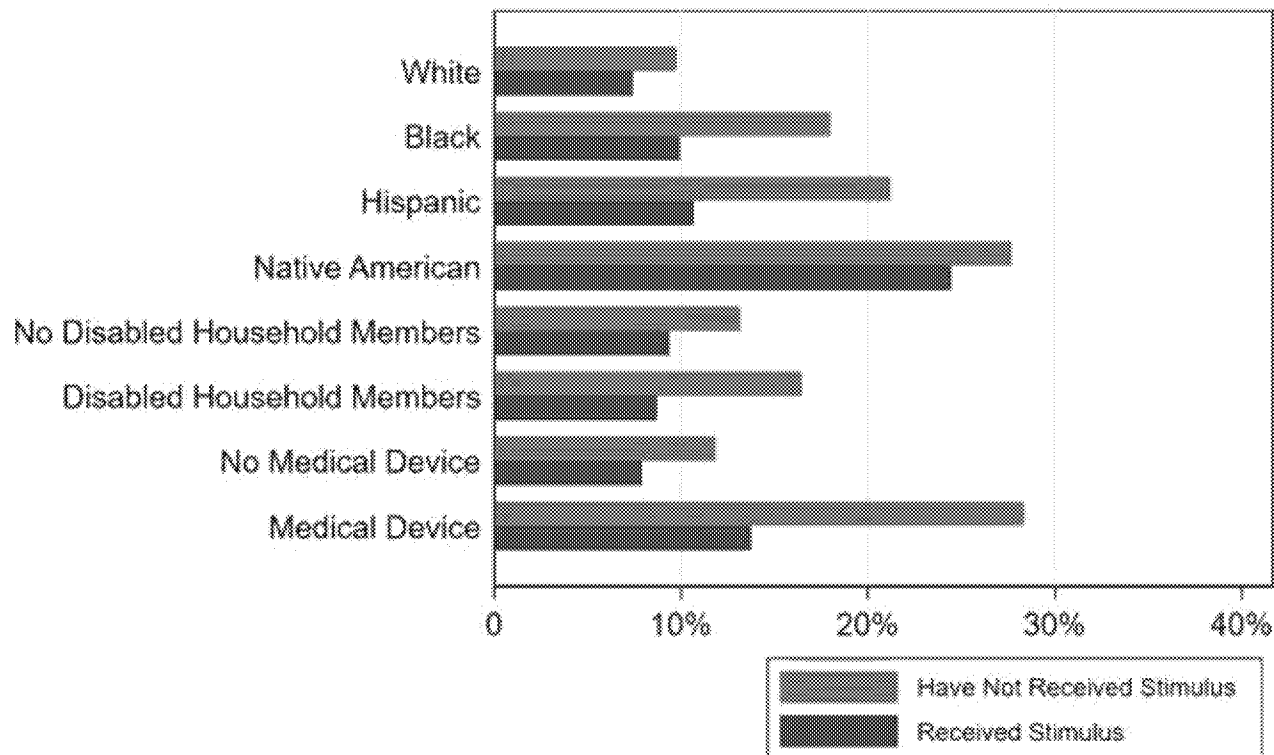
Energy burdens (at the county level) for LMI households. The lightest color in the choropleth scale is less than six percent of annual income spent on housing energy bills, and the darkest is more than 19 percent. Source: Union of Concerned Scientists (2019)

**HITS
LOW INCOME AND PEOPLE
OF COLOR HOUSEHOLDS
HARDEST IN STATES WITH
THE HIGHEST AVERAGE
MONTHLY UTILITY BILLS:**

Avg. Monthly Utility Cost by State



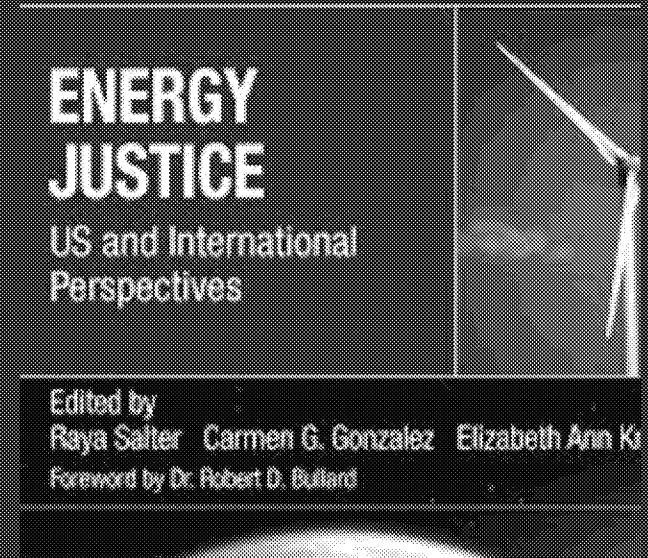
Household could not pay an energy bill



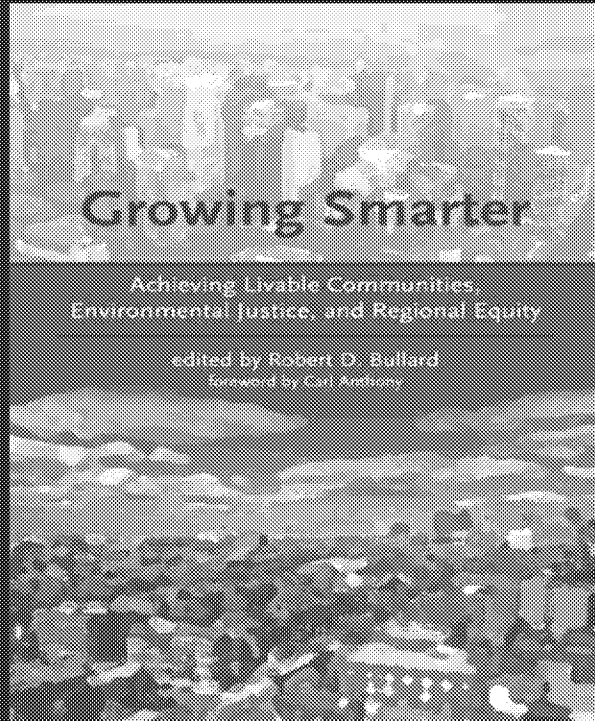
Source: Konisky and Carley (2020)

A Call for Energy Justice Now

- Make safe, affordable, and sustainable energy accessible to everyone
- Mobilize new investments to create pollution-free energy and transportation, workforce development, quality and affordable housing, and critical clean water infrastructure in communities that need it the most
- Address the widening energy, housing, transportation, income, wealth and health gap

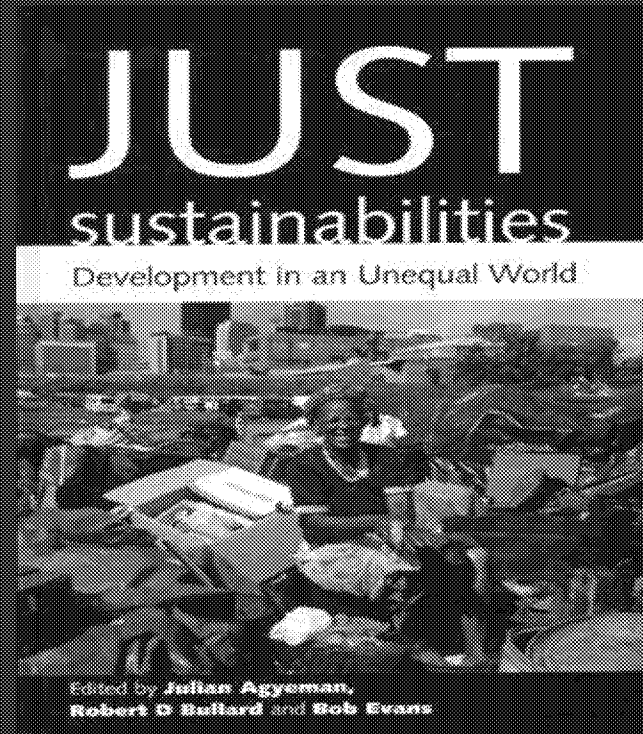


Growing Smarter and Healthier



- Smart Growth is economically sound, environmentally friendly, and supportive of community livability
- Smart growth enhances health and well-being and quality of life
- Smart growth is sustainable and addresses environmental, climate and racial justice

Building Just and Sustainable Communities



- Climate action plans and campaigns need to support existing equity, environmental and racial justice partnerships, networks and consortia for JUST TRANSITION:
 - Energy, food, and water insecurity
 - Equitable development
 - Families below poverty
 - Health, income, and wealth gap
 - Resilient communities
 - Community empowerment

Thank You!

Robert D. Bullard, Ph.D.

Bullard Center for Environmental & Climate Justice

Texas Southern University

Houston, TX 77004

Phone: 713-313-6840

Fax: 713-313-7153

E-Mail: Robert.Bullard@tsu.edu

Twitter: @DrBobBullard